

ASSOCIATION OF AMERICAN COLLEGES BULLETIN

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Report of the Committee on The Minimum College

Two years ago, at the first meeting of this Association, the first draft of the report upon "The Efficient College" was presented by Dr. French. This report had been prepared by a committee, consisting of Professor Ernest D. Burton, of the University of Chicago, and Dr. French, originally appointed by the Council of Church Boards of Education. It was transferred from the body for which it was prepared, and was first presented, as I understand it, to this Association. After its presentation, the Association asked that the study be continued, and that a revised report be presented to its second meeting, which took place a year ago. This was done, and the revised report, with some of the discussion which followed its reading, appears in the published report of that meeting. At the conclusion of the discussion, the Association directed its president to appoint a committee to assist in still further revising the report. The committee so appointed is named, and the terms of its appointment are given, in the first paragraph of the present edition of the report.

The collaboration of the committee has not been so extended and thorough-going as could have been wished. Geographical considerations—one member of the committee resides in New York, one in Ohio, one in Illinois, and one in Minnesota—and the fact that all the members are engaged in reasonably engrossing occupations, have been much in the way. Views have been exchanged, however, both in personal conferences and in letters, and the paper as now presented, while it has not been formally passed upon by the committee as a whole, shows decided effects of the interchange of opinion. Whether the report shall now be considered as final, or what further steps shall be taken in regard to it, rests with the Association to decide. The committee was not asked to recommend upon that point.

A word may be said about the manner of presenting the report today. The paper last year contained a rather elaborate series of tables of statistics from fifty-two colleges of the Association's membership, showing the facts concerning the attendance, teaching and administrative force, income, expenditure, endowment, property, etc., of the institutions reporting. It has not seemed necessary to reprint those tables in this year's report, valuable as they are; but it has seemed decidedly worth while to bring them again to the attention

of the Association in a graphic form. The president of the Association and the chairman of the committee were very much gratified to find that Dr. Edward A. Miller, professor of education in Oberlin College, had made such a graphic showing for a faculty club in that college, and was willing to present and explain his charts here. The first part of the report proper is, therefore, Professor Miller's interpretation of his charts. Dr. French will next present his revised paper. A discussion of standards for larger institutions than the Minimum College, by the chairman of the committee, will follow, and the report will conclude with general discussion of the papers and the problems by the other members of the committee.

Respectfully submitted,

Charles N. Cole, chairman,
Thomas F. Holgate,
Donald J. Cowling.

EDWARD A. MILLER,
Professor of Education, Oberlin College.

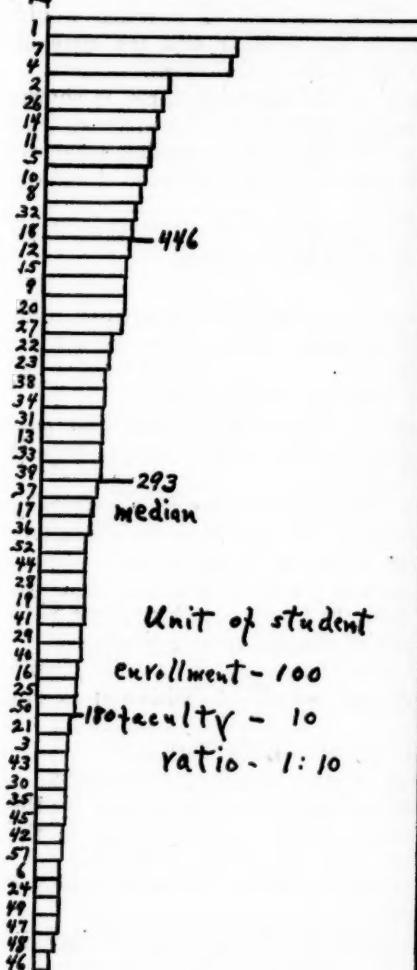
My object in preparing these charts was a twofold one, it was first to get the material that appears in the report of last year into such shape that it could be easily seen and seen in a comparative way, and the other was to see whether the figures as they were given would help in the determination of standards. I suppose there are, perhaps, three ways in which standards can be determined, standards of any kind. There may be a theoretical determination; a person may write out in a theoretical way what seems to him to be the ideal thing. There may be, in certain lines, a scientific study made, and in the third place there may be standards determined as established by the actual practice of institutions.

The first chart I have here shows in a comparative way the position of the fifty-two colleges as far as enrollment is concerned. The median enrollment falls at two ninety-three. A fifty per cent range of the institutions shows the enrollment running between four hundred and forty-six and a hundred and eighty-eight. The total range is from something above two thousand here to something below

(NOTE.—It was found necessary for purposes of reproduction in book form to modify the charts prepared by Dr. Miller for exhibit before the Association. With Dr. Miller's consent they were modified in the office of the Secretary. The text will be easy to follow if you will understand that Charts I, II, III and IV are here presented together on one page. Chart I is here indicated as Chart I. Charts II and III are combined, the professors being shown as a proportionate part of the entire faculty. Chart IV is not reproduced. It can easily be seen in the proportion that exists between Chart I and Charts II and III as here shown. The ratio, as indicated in the chart, is 1 to 10. The highest student attendance is 2,062. The faculty for the same institution is 209, the professors 48 and the ratio between teacher and students is 1 to 9.87. The student attendance in the smallest institution, No. 46, is 87, the faculty 16, professors 9, and the ratio of teacher to student is 5.44. Since these two charts are drawn on a ratio of 1 to 10, which is about the ratio of the institution No. 1, it is easy to see with the eye what relationship each of the other institutions has to this proportion.—Secretary.)

Institution

Chart I.
Students



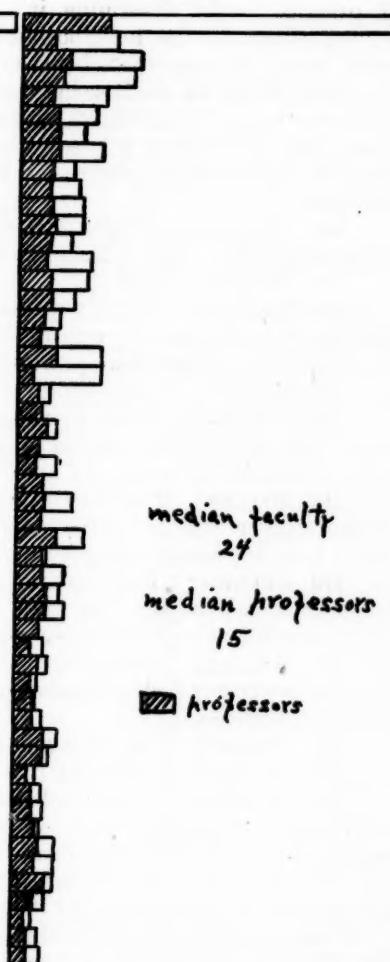
Unit of student

enrollment - 100

180 faculty - 10

ratio - 1:10

Charts II & III.
Faculty



one hundred, as shown here, and if one is interested in finding the relative position of his own institution in regard to any other institution, all he has to do is to look up the number given to it and see where the institution falls. You see, they group themselves around three hundred here, the median, as I say, being two hundred and ninety-three.

The next chart shows the total teaching force. It runs from something above two hundred to something just above ten, evidently, here, with a median total teaching force of twenty-four and a quartile range of from thirty-five to sixteen. That is as far as the standard of practice would determine it. The standard of practice would be somewhere in the neighborhood of twenty-four and the zone of safety would be somewhere between thirty-five and sixteen.

The people of professorial rank in the teaching force is shown next; the range is somewhere just under fifty down to something just below five; somewhere between five and ten with a median teaching force of professors of fifteen and a quartile range of from eleven to eighteen.

MR. HOLGATE: Might I raise a question? I notice that there is one institution with a teaching force of two hundred.

DR. MILLER: Yes.

DR. HOLGATE: And I suppose it is probably the same institution that has a professorial group of forty-eight. Now, there are a hundred and fifty others than professors.

DR. MILLER: Yes, a hundred and fifty nine others.

DR. HOLGATE: That would give a suggestion at least that possibly that institution has some departments which would employ a large number of assistants and instructors.

DR. MILLER: The institution that appears here is a university rather than a college. One university was included in the study and I took the figures simply as they appeared in the study.

DR. FRENCH: That institution was a state university; and was included simply because the facts came to hand. It should not have been included as a comparative study of the group as a whole.

DR. MILLER: I have included it in the comparative study simply for the purpose of showing how it did stand. I believe it is not a state institution.

DR. FRENCH: Yes, it is the University of California.

DR. MILLER: I thought it was Leland Stanford University.

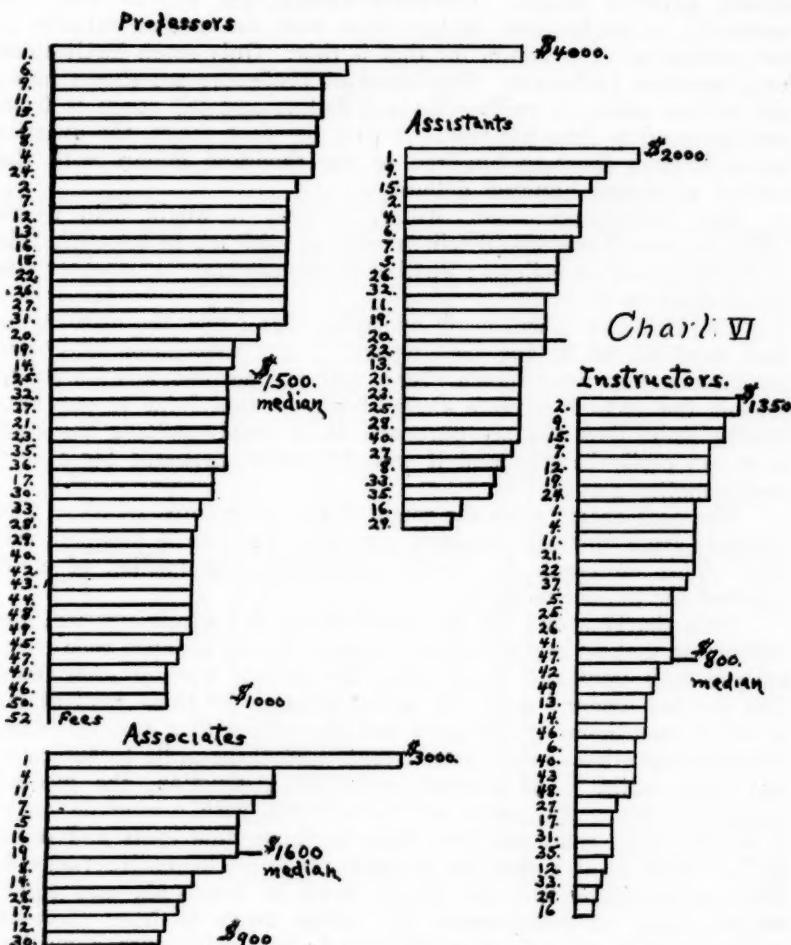
DR. FRENCH: I did not attempt to retain the names of the institutions in memory and, of course, I did not put them in the report. It was Leland Stanford, now that you speak of it.

DR. MILLER: And I have included that for the same purpose, the purpose of comparison, as it appeared in the original tables.

The next chart* shows the number of students per teacher in the different institutions and the range runs from about twenty-five, nearly twenty-five to the teacher, down to something just below five. The median range, fifty per cent of the total, runs from nine and four-tenths to a little above fifteen. The zone of safety evidently is somewhere between nine and fifteen with the limit at twelve. I have used the median rather than the average.

*See note, page 4.

Charl. V. .
Salaries.



(NOTE.—Again, for purposes of reproduction, Chart V of Professor Miller, which refers to salaries of Professors, Associate Professors and Assistant Professors, is combined with Chart VI of Professor Miller representing the salary of instructors.—Secretary.)

This next chart* represents the salaries of professors. The professors and assistant professors are represented in a little different form. The range of professors, or rather professorial salaries, runs from four thousand down. The lowest actual salary shown here is one thousand dollars. The median salary is fifteen hundred dollars. I have not run this scale out full length because a number of the institutions have the same salaries. The associate salaries run from three thousand dollars to nine hundred dollars with a median of sixteen hundred dollars. Curiously enough, the median salary of associates is one hundred dollars more than the median salaries of the professors. The reason for that is this: Only seven institutions have associate professors. The assistant professors are shown here; the median salary is twelve hundred dollars and the range is from two thousand to four hundred. A fifty per cent range, the quartile range is from fourteen hundred to one thousand dollars with the median at twelve hundred dollars.

DR. CLIPPINGER: Dr. Miller, I think it would help us in following you if you would tell us what guided you in selecting this particular group of colleges; whether it was arbitrary or whether you had designs in it.

DR. MILLER: I will begin by saying that I took the institutions that were shown in the last report of the Association, fifty-two institutions that were shown there; and my purpose was simply to present the facts that were there shown in this form to our own faculty club; that was my purpose. It is simply putting the stuff so it can easily be seen and it was, of course, prepared for a very much smaller group.

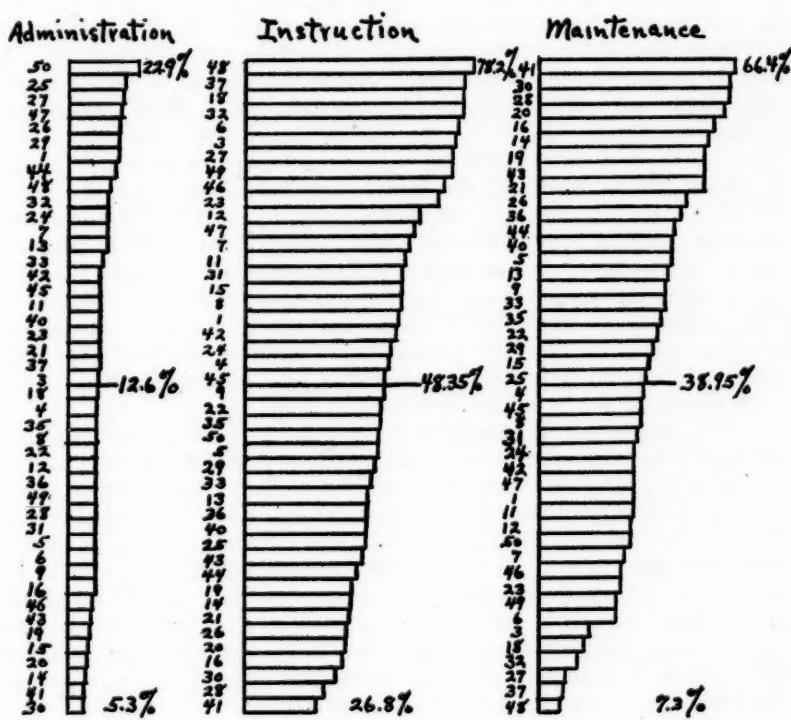
The next chart* gives the range of the instructors' salary: The range is from thirteen hundred and fifty down to a hundred and fifty. This represents the lowest salary with the median of eight hundred for the entire group.

This chart† shows the per cent of cost for administration, for instruction and for maintenance. That is, I have grouped each item, arrayed each item and found what the median was for each item. The median amount spent for administration by these institutions is out of each dollar twelve cents and six mills with a quartile range for administration from fourteen cents and three mills to ten cents and three mills. The amount spent on instruction, the median amount, is forty-eight cents and three mills, with a quartile range from fifty-eight cents and two mills to thirty-nine cents and seven mills. That is, I mean the median range. The entire range is from seventy-eight and two tenths down to twenty-six and eight-tenths. And on maintenance the entire range is from sixty-six cents and four mills to seven cents and three mills with a median of practically thirty-nine cents; thirty-eight cents and nine and a half mills with a median range of forty-seven cents and a half mill, to twenty-nine cents and a half mill. I put on here the median expenditure for administration, instruction and maintenance, and as I was preparing this for a group of Oberlin people I put on the amount that Oberlin was spending, which was almost exactly the

*See page 7.

†See page 9.

Chart VII.
Comparative Cost.



same thing. The median was twelve and six-tenths, eighteen and four-tenths, thirty-nine and two-tenths. Oberlin is spending twelve and three-tenths.

DR. NOLLEN: Do you happen to know whether in these cases the figures are on the same basis for the different institutions?

DR. FRENCH: I may say, Mr. President, the report was not always accurate and these figures as you will all appreciate are all approximate, yet they do indicate the facts; that is, they indicate the relative situation.

DR. MILLER: Now, I have tried to bring together here on this one chart, the final chart,* the facts that have appeared upon all of these. And a representation of the median institution. Well, first as to enrollment, the total range of enrollment is two thousand and sixty-two to eighty-seven with the median range of four hundred and forty-six to a hundred and eighty and a median institution with an enrollment of two hundred and ninety-three. So the median institution would have two hundred and ninety-three students. It would have fifteen professors. It would have a total teaching staff of twenty-four. It would pay those professors fifteen hundred dollars. It would pay its associate professor sixteen hundred dollars. It would pay its assistant twelve hundred dollars, and pay the instructors nine hundred dollars. It would see that there were twelve students to each teacher, that the cost per student was a hundred and seventy-four dollars, that the cost of administration was twelve dollars—twelve cents and six mills out of each dollar, forty-eight cents and three mills for instruction, thirty-eight cents and nine mills for maintenance. Its total income per year would be fifty-five thousand five hundred dollars. The total range of income is between one million two hundred thousand and four thousand six hundred dollars.

The source of that income is as follows: From students' fees the total range is from a hundred and four thousand three hundred and ninety-four dollars to five hundred dollars; the quartile range is from thirty-four thousand two hundred and sixty to eight thousand five hundred with a median amount from students' fees of seventeen thousand seventeen dollars and fifty cents. From room rent, the sources of income range there from a hundred and six thousand and twenty-four dollars to nothing. The median fifty per cent, is from eight thousand thirty-three dollars and fifty cents to eight hundred and seventy-four dollars. In endowment, the amount varies from eight hundred fifty seven thousand dollars to nothing, with a median range of forty-three thousand five hundred and twenty dollars to eleven thousand three hundred and four dollars with a median amount of nineteen thousand eight hundred and fifty-two fifty. The deficit ranges from two hundred and thirty-one thousand dollars to nothing with a median fifty per cent range, of eighteen thousand two hundred and thirty-eight dollars, and a median deficit of eight thousand eight hundred seventy dollars and fifty cents. The median institution would derive its income as follows: Thirty-five and three-tenths per cent of it from students' fees, forty-one and one-tenth per cent of it from endowments, five and two-tenths per cent

*See page 11.

CHART VIII—SUMMARY

Showing Total Range, Quartile Range and Median
For Each Item Discussed

Enrollment

Total Range.....	2,062-87
Quartile Range.....	
Q3.....	446
Median.....	293
Q1.....	180

Professors

Range.....	48-7
Q3.....	18
Median.....	15
Q1.....	11

Salary, Professors

Range.....	\$4,000-\$1,000
Q3.....	2,000
Median.....	1,500
Q1.....	1,200

Associates

Range.....	\$3,000-\$900
Q3.....	1,750
Median.....	1,600
Q1.....	1,125

Assistants

Range.....	\$2,000-\$400
Q3.....	1,400
Median.....	1,200
Q1.....	1,000

Instructors

Range.....	\$1,350-\$150
Q3.....	1,000
Median.....	800
Q1.....	450

Income—Total

Range.....	\$1,200,000-\$4,600
Q3.....	105,571
Median.....	55,500
Q1.....	34,280

Student Fees

Range.....	\$104,394-\$3,500
Q3.....	32,260
Median.....	17,076+
Q1.....	8,100

Endowment

Range.....	\$857,000.00-0
Q3.....	43,520.00
Median.....	19,852.50
Q1.....	11,304.00

Room Rents

Range.....	\$106,024.00-0
Q3.....	8,332.50
Median.....	2,487.00
Q1.....	874.50

Deficit

Range.....	\$231,000.00-0
Q3.....	18,238.00
Median.....	8,870.50
Q1.....	1,620.00

Per Cent Sources of Income Medians

Fees.....	35 $\frac{3}{10}\%$
Endowment.....	41 $\frac{1}{10}\%$
Deficit.....	18 $\frac{1}{10}\%$
Room Rents.....	5 $\frac{2}{10}\%$

Total Teaching Force

Range.....	209-11
Q3.....	35
Median.....	24
Q1.....	16

Students per Teacher

Range.....	\$24.62-\$5.44
Q3.....	15.12
Median.....	12.06
Q1.....	9.42

Cost per Student

Range.....	\$512.06-\$96.00
Q3.....	277.00
Median.....	174.00
Q1.....	143.50

Per Cent Cost of Administration

Range.....	22 $\frac{3}{10}\%$ -5 $\frac{3}{10}\%$
Q3.....	14 $\frac{1}{10}\%$
Median.....	12 $\frac{1}{10}\%$
Q1.....	10 $\frac{1}{10}\%$

" " Cost of Instruction

Range.....	78 $\frac{2}{10}\%$ -26 $\frac{3}{10}\%$
Q3.....	58 $\frac{3}{10}\%$
Median.....	48 $\frac{3}{10}\%$
Q1.....	39 $\frac{2}{10}\%$

" " Cost of Maintenance

Range.....	66 $\frac{4}{10}\%$ -7 $\frac{3}{10}\%$
Q3.....	47 $\frac{1}{10}\%$
Median.....	38 $\frac{4}{10}\%$
Q1.....	29 $\frac{2}{10}\%$

of it from room rent and it would have each year a deficit of eighteen and three-tenths per cent.

A VOICE: Mr. Chairman, would it be proper to make inquiry as to how many institutions there are who find it imperative to rely upon an irregular source of income which you have labeled as deficit? How many of these fifty-two institutions according to your study are there in that condition?

DR. MILLER: Well, I am not sure that I can tell. Apparently about three institutions.

THE VOICE: Three out of fifty-two?

DR. MILLER: Four, perhaps, somewhere there. I won't take my oath that that is exact, but that is about as it is. Just one other word: I also figured out that the presidents' salaries ranged from twelve thousand to twelve hundred in these fifty-two institutions with a median range of four thousand to two thousand and a median salary of three thousand, and the totally productive plant and endowment ranged from twenty-four million ninety one thousand dollars to a hundred and sixty-eight thousand seven hundred and sixty-four dollars with a median range of one million five hundred and eighty-three thousand and sixty-seven dollars to four hundred and seventy-three thousand dollars. So the median institution ought to have a plant and endowment of seven hundred and nineteen thousand nine hundred dollars. The figures here state the productive endowment and plant.

CALVIN H. FRENCH,

Assistant Secretary College Board Presbyterian Church, U. S. A.

Let me make a single remark about the review lesson. The facts upon which Professor Millier's review are based were contained in fifty-two reports which were sent to me last year. It is very well known that colleges do not always keep complete or accurate records, consequently such figures as these are not always complete or accurate. I think, however, that these statistics are approximately correct, and it is interesting to me to note that the conclusions drawn by the sort of investigation Mr. Miller has made, while in some cases they showed discrepancies, as in the case of the salaries of the professors and the associates, in regard to financial matters are approximately correct. Fifty-two institutions out of several hundred do not give a very wide range upon which to base a conclusion. Moreover, reports which are only approximate, of course, involve in the conclusion an element of incompleteness. But I think you have noticed that these conclusions embrace things upon which we will agree.

The report which is now being placed in your hands is a revision of last year's report. The object of it is to find what it costs to make and maintain a good college. The method adopted last year was to construct what we called a minimum college, a purely theoretic thing upon which we might build in our effort to secure a descrip-

tion of a really complete and good college, which we term an efficient college. We are retaining that terminology, but in this paper are varying the method of the discussion. I cannot, of course, read the paper and I will only call your attention here and there to certain points leaving you to ask questions if I pass over matters that are of interest to you.

First, note the change in the method of the discussion. I appreciated even when helping to construct last year's paper that the minimum college was a purely ideal thing; it was open to the criticism which was made, namely that it dealt with theories and not with facts. Consequently, after correspondence and personal conference with other members of the committee, a new method was adopted in this paper. I have begun by taking reports from sixteen actual colleges, taking those sixteen for two reasons. They are typical colleges, their data being within the range of facts that we must first consider. The reports, reasonably complete, were available and on the basis of the facts disclosed by the sixteen reports a new kind of college is constructed which is called in this paper the average college. Following the same analysis that was used last year, the average college is constructed upon the basis of the facts revealed in those sixteen reports. On Page 21 the average college curriculum is first mentioned, with less attempt to enter into detail than last year. Starting with what the high schools give, as I think we must do, the college is built upon the foundation thus provided. The entrance requirements are indicated on Page 22. There is a measure of elasticity in them. I think there is included the things that must be included, with an opportunity to vary in accordance with the conditions in different localities or different schools. In somewhat the same manner the curriculum, an outline of which is found on Page 22, is constructed. It is suggested that the distribution of classes be in assignments of two, three or five periods per week. This, however, is only a suggestion. Some do not agree with it. To my mind, and, I think, to the mind of the committee, it offers a measure of elasticity and uses economically the time of the faculty and the class rooms of the institution.

Next follows a discussion of the faculty. First of all, is a statement of the facts as disclosed in these sixteen reports. On Page 23 is a table showing enrollment and the distribution of students in the different classes, showing an enrollment in the average college of seventy-four freshmen, forty-four sophomores, twenty-six juniors and twenty-three seniors; total a hundred and sixty-five. This distribution is varied when we come to consider the minimum college in accordance with conditions found to prevail in older and more fully developed colleges. The budget of the average college is indicated on Page 24, where you find again a table constructed from the sixteen reports, omitting one college—Number Fifteen did not give the facts completely enough for use in this table—the average of fifteen being shown.

May I stop for a moment to call your attention to the three divisions of college expenditures, namely administration, instruction, maintenance? Evidently we all agree upon the terminology and

upon these general divisions of college expenditure. Perhaps we will not agree, however, on certain items included in the administrative expense. My own view, and I think the view shared by the committee, although, of course, we have not had time to consult very freely, is that under the head of "Administrative Expense" should be grouped all salaries paid to administrative or executive officials; such as the president and his assistants, the deans, registrars, treasurers, and their assistants, the stenographers, and office expense. In addition, I should include in this division also the salary of the librarian and his assistants, partly because I do not know where else to place it. He is not an instructor. It is very desirable, it seems to me, to make the item of instruction exclusive of all other things. One of the important questions to ask of any college is how much actually does it spend for instruction. Upon the answer to that question you may base a conclusion which is pretty accurate with regard to the character and value of the institution. The more it spends upon instruction probably the better college it is. Where then shall be put the librarian? He is not a mere hireling employed to care for the physical plant and equipment, as is a fireman or a janitor. He does administer a certain part of the educational equipment of the institution for the benefit of the students. Consequently my own conclusion was that his salary and those of his assistants should be listed among the administrative expenses, although his work is somewhat different from that of the president and the assistants of the president.

The budget. The most important item in the budget is the salary of the professor. I believe that consideration of it is the most urgent duty now confronting those interested in the American college. The professor is underpaid and the college is, therefore, in a measure, inefficient. The college will be efficient, first of all, when its teachers are so supported that they can give themselves without anxiety to their work and go on doing so year after year. In addition to this, they must provide in some way for old age and sickness.

I am reminded of a thing I meant to say a moment ago. We are very lax in our use of the term "professor." In the reports upon which Mr. Miller's charts were based, the term "professor" is doubtless applied to many who ought not to bear it. We ought to be more accurate in our designation of professorial rank, but we have to take the facts at present as they are reported, to us. Table Five on Page 26 contains a summary of salaries paid to teachers in twenty-six institutions, some of which are much larger and stronger than any of the sixteen. In these twenty-six colleges three hundred and sixty-seven men were called "professors." They received salaries ranging from seven hundred to twenty-five hundred dollars, the total being five hundred and thirteen thousand three hundred dollars, making the average salary actually paid to these three hundred and sixty-seven men one thousand three hundred and ninety-eight dollars. Of course, many received more than that, but that is the average, and, for our present purpose, we may take it as the sum received by the college professor.

Now then, what do these men actually pay out of their pockets

annually for the support of their families, and for other necessary expenses? To get some light upon that point I sent a number of letters, confidential letters, saying that I would not reveal any names reported to me, and, under this condition asked some sixty or seventy men to tell me how much it actually cost them to get through the year. I received a considerable number of replies. I can't stop to read the things stated on Page 26. Read them at your leisure. They will indicate some of the deprivations suffered and the sacrifices made by those who teach in the American college. Twenty-one replies were in such shape that I could use them, and these twenty-one men, as you see by the table on the top of Page 27, spent an average of nineteen hundred and forty-three dollars.

Supposing that we go back to the average on Page 26. Look at one thousand three hundred and ninety-eight dollars as the average actually received. Each one of these men, therefore, is paying out of his own pocket five hundred dollars for the privilege of teaching.

QUESTION: What was the actual average salary of the professors who did reply?

DR. FRENCH: Well, in no case was the salary over two thousand. I can't answer that question except in a general way. It ran from two thousand down.

Starting with this information I undertook to construct the average college. We have ascertained that the amount available for salaries in the average college, as will be shown in a moment, is sixteen thousand nine hundred and forty-one dollars and that the average number of teachers in the sixteen colleges is fourteen, and that the salaries might be distributed as shown in Table Seven.

Passing on to Page 28, we find a statement of the total income of the sixteen colleges. It differs slightly from the form of the figures in last year's report by including under the head of "Students' Payments," "Room Rents," as well as "Tuition Fees" and other fees. The "other fees" are incidental fees, and various fees that different colleges charge. The average rate of tuition as shown by these reports is fifty-one dollars, the total range being from one hundred dollars down to eighteen dollars. From tuition fees, an average of eight thousand nine hundred and forty-four dollars is derived; from other fees one thousand nine hundred and six dollars; from room rent one thousand eight hundred and thirty-three; total from students twelve thousand six hundred and sixty-three.

QUESTION: Is the room rent total profit?

DR. FRENCH: Net profit. In every case it is net. This is a stripped budget, may I say, and all non-operating expenses are excluded. Total from students, twelve thousand six hundred and sixty-three dollars; from endowments, fourteen thousand fifty-nine dollars; from donations, six thousand three hundred seventy-three dollars; computed as deficit, three thousand one hundred and nineteen dollars; total income thirty-six thousand two hundred and fourteen dollars. The deficit may I say, is computed in the following way: If after discovering the income from visible sources, namely, tuition fees and other student fees, endowments and donations, more was required

to make up the total of expenditure as shown, such balance was computed as a deficit.

Passing on to Page 29, you will find amounts invested in plant and endowments. The average invested in plants is two hundred and thirty-six thousand eight hundred and seventy-seven; the average in endowments, two hundred and sixty-five thousand one hundred and seventy dollars.

On Page 30, is shown in summary form the things that have been mentioned. The average college will have a hundred and sixty-five students distributed as shown; it will have a faculty of sixteen, one of whom will be the president, another the librarian, the others being instructors. It will have an income of thirty-six thousand two hundred and fourteen dollars. It will expend that income as follows: Six thousand three hundred and fifty-eight dollars for administration, sixteen thousand nine hundred and forty-one dollars for instruction, twelve thousand nine hundred and fifteen dollars for maintenance. The total invested in the plant will be two hundred and thirty-six thousand eight hundred and seventy-seven dollars, and the total endowment, as indicated by these reports, will be two hundred and sixty-five thousand one hundred and seventy dollars. To capitalize donations and deficit would require one hundred and eighty-nine thousand eight hundred and forty dollars, making a total endowment of four hundred and fifty-five thousand and ten dollars. The total assets of the average college is, therefore, six hundred and ninety-one thousand, eight hundred and eighty-seven dollars. This sort of college is actually in operation all about us except that I have removed one very great difficulty in capitalizing the donations and the deficits.

Now, in the ideal college of this type, what would be the distribution of the students among the different classes? Will you notice for a moment the table at the top of Page 32 in which four colleges are named. I suppose we would agree that they are among the very best colleges in their development, administration and other aspects. Those four colleges distributed their students actually as follows: Thirty-three and six-tenths per cent freshmen, twenty-four and three-tenths per cent sophomores, twenty-three and five-tenths per cent juniors, and eighteen and six-tenths per cent seniors.

QUESTION: Is the Trinity mentioned, the one in North Carolina or Connecticut?

DR. FRENCH: Connecticut. Now, assuming that that is as near an ideal distribution as we could get, we will construct a minimum college, distributing one hundred students in that proportion. The minimum college is shown in tabular form, beginning on Page Seventeen.

You will observe the distribution of students in classes, the number in the faculty, and the total amount assigned to administrative expenses. Remember that this is in the same proportion observed in the best colleges we know, but reduced to accord with a student enrollment of one hundred. For administration the amount assigned is seven thousand three hundred and twenty-five dollars. For instruction, eight professors are assigned fifteen hundred each. I

am keeping to the minimum salary but do not imagine that I think fifteen hundred dollars is an adequate salary for a professor. I am only taking the facts as we have them before us. Assuming a fifteen hundred dollar salary, there might be eight professors on that salary. The maintenance expense should be about twelve thousand six hundred and seventy-five dollars, making a total expenditure of thirty-two thousand dollars for a student body of one hundred. The income from tuitions, assuming a fee of sixty dollars per student and assuming also that every student stays throughout the year, and that there is a loss of only ten per cent in collections would be five thousand four hundred dollars.

Thirty-five hundred dollars might be received from room rents, fifteen hundred dollars from other fees. The balance of the income, amounting to twenty-one thousand six hundred dollars must be derived from endowments. A total of three hundred and fifty thousand is to be invested in the plant. If we assume that all the academic activities could be conducted in one building, that building to be comfortable and adequate ought to cost a hundred and fifty thousand dollars. Dormitories, if not fireproof, would cost fifty thousand dollars each. The total cost of the plant and equipment is estimated as three hundred and fifty thousand dollars. The table, therefore, gives a picture of what we are pleased to call the minimum college constructed on the basis of the best information we could get.

QUESTION: You have no gymnasium included in here.

DR. FRENCH: No, we suppose the minimum college can get along without a gymnasium. It ought to have one, of course, but it must wait until it becomes an efficient college.

QUESTION: May I ask if you assumed the distribution and maintenance expense somewhat as is indicated on Page Fourteen?

DR. FRENCH: Yes. We will now go on to the efficient college and construct it upon the same lines, but make it what we think it ought to be, though not all we should like it to be. There are many other things which more fully developed colleges will have. Our object is to present a picture of a college which can do all that a college needs to do, leaving, of course, room for growth in many things which a college might desire to do. I do not think the salary named as much as it ought to be, and I do not think that other things are as complete as they might very well be, but such a college as is here described can do all the things that a college may properly be required to do. Without stopping to call your attention to anything further, will you note the table given on Page 35? I have fixed the total number of students at five hundred, and distributed them in the proportions indicated on Page 31. This gives us ninety-five seniors, a hundred and fifteen juniors, a hundred and twenty sophomores and a hundred and seventy freshmen. I have suggested a faculty of fifty for a student body of five hundred.

QUESTION: Do you find that the mortality between sophomores and juniors is as small as you have it here represented in any efficient college?

DR. FRENCH: In a few, such as the four named.

QUESTION: Only five out of a hundred and twenty?

DR. FRENCH: Of course, this is an ideal distribution and it simply follows the proportion indicated in those four colleges. In the great majority of colleges the difference will be far greater.

DR. NOLLEN: Those four colleges differ vastly from the average college in that respect?

DR. FRENCH: Oh, yes, and you must remember that we are describing the thing as it ought to be. For administration, total of eighteen thousand six hundred and fifty dollars is estimated. I hope if you disagree with us as to the items included under "Administration" you will make it known. For instruction, twenty-two professors at twenty-five hundred dollars each, sixteen assistants at two thousand each, and eighteen instructors at fifteen hundred each, would bring the total to ninety-nine thousand dollars. For maintenance, the estimate is forty-nine thousand one hundred dollars, making a total expenditure of one hundred and sixty-six thousand seven hundred and fifty dollars.

DR. COWLING: For a college of about five hundred students, is that about the average expenditure?

DR. FRENCH: I have not attempted to get information that would enable me to answer that question except in a general way. There are a few colleges which approach this standard. I am constantly referring to Amherst as an example. The New England college which has developed for a hundred and fifty years or so will approximate these figures, but none will correspond with them exactly.

I think the estimate of forty-five thousand dollars from tuitions is too high. An annual tuition fee of one hundred dollars from five hundred students, with a discount of ten per cent for losses on collections, would, however, yield this amount. A somewhat similar computation is made for room rent and other fees. The total from students thus estimated is fifty-six thousand dollars. A few colleges with that number of students approximate that sort of income, but not very many. On this basis, we will need to get from endowments a hundred and ten thousand seven hundred and fifty dollars. The group of buildings needed indicate a total investment of nine hundred and eighty-five thousand dollars. The endowment necessary to produce a hundred and ten thousand seven hundred and fifty dollars at five per cent is two million two hundred and fifteen thousand dollars.

QUESTION: Dr. French, do you include under tuitions just the cash fees or also scholarship fees secured from endowment?

DR. FRENCH: Cash fees only.

QUESTION: Should scholarships be classified as endowment?

DR. FRENCH: Yes. In this analysis I have not indicated any endowed scholarships, but if there are endowed scholarships that portion of the income should be included in "Incomes from endowment."

QUESTION: That includes all fees?

DR. FRENCH: Yes, under the head of "Other Fees" should be included library fees or incidental fees or whatever you call them.

In analyzing the work of a college and computing its costs some unit of measurement is necessary. The student hour is the

best unit, I think, and a method of using it to measure costs is indicated. The last paragraph speaks briefly of the necessity of keeping records.

QUESTION: Wouldn't it be better to get some other term for the efficient college? The "inefficient college" might send students away if they thought the college inefficient.

DR. FRENCH: I referred to that a moment ago. My own view is that we are using a technical term and when we use it as we define it there is no reflection whatever upon any college to which it would apply.

QUESTION: May I ask if you include regular annual conference collections in the deficit?

DR. FRENCH: Yes, I would include them in the deficit for this reason: First, let me say that such income is for that particular college practically an assured income. Nevertheless, a college is not permanently established and assured until its necessary expenditure is secured from student fees and endowment. My own thought is that as soon as possible that item of income should be capitalized.

THE EFFICIENT COLLEGE

REV. CALVIN H. FRENCH,

Assistant Secretary of the College Board of the Presbyterian Church.

INTRODUCTORY

THIS paper, in its original form, was presented at the meeting of the Association of American Colleges at Chicago, Illinois, in January, 1916. After a discussion, a committee, consisting of Dean C. N. Cole, of Oberlin College; Dean Thomas F. Holgate, of Northwestern University, and President Donald J. Cowling, of Carleton College, was appointed to assist in revising it for presentation at the meeting of the Association to be held on January 11th to 13th, 1917, "either as a final report or as another step toward a final report."

Purpose The purpose is to describe an efficient college in terms which will be generally accepted and approved. If this can be done, then an itemized statement of the things making up such a college may become both a stimulus and a guide to many colleges in their efforts to attain efficiency. It may also serve as a guide in the forming of an opinion with regard to any particular college which may be under observation.

Method In the former paper the discussion began with an analysis of what was called the "Minimum College." As then presented, this college was a purely hypothetical thing. A certain arbitrary value was given to each of its parts. These values were, indeed, assigned in the light of general knowledge with regard to things of like kind. But, being arbitrary values, and the elements to which they were assigned being grouped and used in arbitrary fashion,

the Minimum College, so constructed, invited the obvious criticism of having only a forensic, not a practical value. Indeed, the paper itself distinctly stated that this was the only reason for presenting such a thing as the Minimum College then described. It was intended only to be a step in an argument.

Further consideration, however, makes it clear that the same purpose can be accomplished by an appeal first to fact rather than to theory. To be of real value, even for our forensic purpose, the Minimum College should correspond as closely as is possible with the best facts in educational experience. Being an ideal thing, it may depart from facts which are not the best possible facts in their own fields. It should not, however, even in the interest of idealism, go beyond the limits of the best possible facts as illustrated or indicated by educational experience. To put it in another way, the ideal college must not contain anything which might not be found in some real college.

In view of these considerations the method of the discussion is quite radically changed from that of the former paper. A new kind of college will be constructed from materials provided by a study of sixteen actual colleges. These particular colleges are selected because complete reports, including the necessary data, are at hand and also because they are typical institutions. The college so constructed will be called the "Average College."

The Average College will, obviously, fall short of completeness and efficiency. It will, however, give a basis of fact and experience upon which we may build conclusions with regard to the ideal college. The Average College will, therefore, be used to introduce the new Minimum College.

From every one of the sixteen colleges used alumni have gone to the best graduate schools. All of these alumni have made creditable records in their graduate work. Some of them have made brilliant records. The annual budgets of these sixteen colleges range from \$21,242 to \$58,818; their plants and equipment from \$119,000 to \$383,197; their endowments from \$44,064 to \$540,791. The budget figures have been stripped of everything except actual operating expenditures and real income. All payments on annuities, debts, property or other similar items have been eliminated from the expenditures. Only actual operating expenditures are used in the computation. In like manner, the income is computed upon the basis of amounts actually collected from students and received as income from endowments. To the total thus obtained are added such amounts as were received by donation. If these three items do not equal the operating expenses, a deficit is computed. All the statistics for music, normal or commercial departments have been eliminated. In some instances, the institutions support preparatory departments. The reports were so made that the data for the college and the preparatory work could not be separated. The presence of these figures will not, however, affect the proportions or relations which we are seeking to discover. The only effect, if any, will be to make the conclusions a little more optimistic than they might otherwise be. For this reason they may be all the more emphatic.

In constructing the Average College upon the plan now being followed, the averages of the various available items in the sixteen colleges mentioned will be used in assigning values to the various elements of the new college. This method will be available more fully in determining the value of those elements of the college which rest upon a basis computable by statistics. In determining a curriculum and deciding with regard to the size of a faculty, more general considerations will guide. The elements of the college will now be considered in the following order: 1. the curriculum; 2. the faculty; 3. the student body; 4. the budget; 5. the plant and equipment; 6. the endowment.

THE AVERAGE COLLEGE

The Curriculum As will be seen in a later paragraph, the number of instructors available in the Average College is fourteen. This will permit a rather wide range of subjects and a considerable amount of elective work. A combination of two, three and five-hour courses is suggested, but not made a necessary part of the outline of the curriculum. Such a combination would economize time for both instructors and students. It would permit a good balancing of the curriculum. It would use class-room space to the best advantage.

The number of periods per week assigned to a student is fifteen. The graduate schools quite generally are reluctant to allow full credit to students whose college courses have required more than fifteen hours of work per week.

In attempting to outline the curriculum, the very first question to be answered is, "What shall be the entrance requirements?" In practice, the college must build on what the high school does. The two act and react upon each other, and, in the course of time, there are certain modifications brought about in each. At any given time, however, college entrance requirements must be such as the average graduate from the high school can meet. Greek must, therefore, be eliminated as a required subject. It should, however, be retained as an optional subject for those who can and choose to present it. For similar reasons, options must be allowed in the presentation of Latin. The doors of the college must be open to the student who presents two years of Greek, or none at all; four years or two years of Latin, or none at all. Of course the subjects he presents will indicate the college courses which can be opened to him. These will range from the old-time classical course, requiring for entrance two years of Greek and four years of Latin, to the scientific or modern languages courses, which may require neither Greek nor Latin at entrance or later. These considerations indicate entrance requirements in which the element of quantity is constant, while the element of content is variable. The following tabular statement of entrance requirements is offered as one which may meet the conditions mentioned:

Table 1. Entrance Requirements

English	3 units
Mathematics	2 units
Language:	
Latin	4 units
Or Latin	2 units
And German	2 units
Or Modern Language	4 units
Science	2 units
History	1 unit
Options	3 units
Total	15

Built upon this foundation, the college curriculum will offer to the few students who present for entrance four years of Latin and two years of Greek the opportunity to pursue the cultural, classical course known to our fathers and offered even yet by some "impractical" but exceedingly valuable colleges. It will offer to the larger number who come to college innocent of either Latin or Greek an opportunity to pursue scientific or modern language courses for which appropriate tests and degrees must be devised. It will offer opportunity to pursue other courses varying between these two extremes.

Any particular Average College, with only the teaching force and equipment indicated in this discussion, cannot successfully offer all the courses thus indicated. It may, however, select certain of these courses and offer them with credit to itself and its students.

It may be that the following outline will suggest curricula capable of adaptation to the varying conditions mentioned. It is offered only as a possible curriculum built under the conditions imposed by the terms of our problem. The total number of hours per week is fixed at fifteen, but the distribution of these hours among the courses suggested is left to be determined by each faculty.

Table 2. The Curriculum

	Hours per Week	Hours per Week	Hours per Week	Hours per Week	Hours per Week
Freshmen	?	Sophomores	?	Juniors	?
English	?	English	?	Bible	?
Mathematics	?	Language	?	Science	?
Language	?	History	?	Economics	?
Science	?	Science	?	Psychology	?
	—	—	—	Elective	?
	15		15		—
					15

The Faculty

The sixteen colleges from which the data for the construction of the Average College is drawn have faculties ranging in number from eleven to twenty-three. The average number is sixteen. Of these, it is assumed that the president and the librarian will do no teaching. Each will be kept busy enough without doing any teaching. The number of instructors will, therefore, be fourteen. Two of these will act as deans and another as registrar. For these the amount of teaching will be reduced in proportion to the amount of other work required of them. If the college is coeducational, as it is assumed the Average College would be, two deans will be needed.

Fifteen hours of teaching per week is considered a full schedule. Fourteen teachers, each carrying fifteen hours, could offer a schedule including two hundred and ten hours per week. After deducting as many of these hours as may be necessary to provide for the work of the deans and registrar, there will still be ample time left to permit dividing the Freshmen into two recitation sections and offering a considerable number of electives.

As colleges grow older, richer and, presumably, better, they tend to assign fewer teaching periods to their instructors. In some struggling colleges, devoted teachers accept teaching schedules including as many as thirty periods per week. With such assignments, it is, of course, impossible to do good college work. Assuming the teacher's health and strength, however, a teaching schedule of fifteen fifty-five minute periods per week may be carried indefinitely with an acceptable degree of efficiency. But such a schedule will prove to be a maximum schedule. It will keep a teacher working at the limit of his capacity every day. It will give him no opportunity to increase his efficiency by advance work in his department. It will give him little, if any, opportunity to fit himself for advancement in his own field. Each day's wastage is made up, but no more, by each day's refreshment. Efficiency is maintained, but, paradoxical as it may sound, it is an efficiency which defeats its own highest ends. Ultimately, the teacher wears out, having accomplished nothing but daily routine. This is a result not contemplated by the genuinely efficient college.

**The
Student
Body**

The number of students assigned to the Average College is one hundred and sixty-five. This is the average number enrolled in the sixteen colleges from which our illustrative facts are drawn. The enrollment and classification of students in these colleges last year was as follows, the colleges being listed in the order of their productive endowment, beginning with the one having the largest endowment:

Table 3. Enrollment in Sixteen Colleges

	Freshmen	Sophomores	Juniors	Seniors	Total
1.	136	74	32	43	285
2.	57	31	15	23	126
3.	71	45	19	28	164
4.	126	96	60	38	317
5.	62	72	21	18	179
6.	93	46	45	29	213
7.	66	31	24	25	146
8.	136	46	22	25	229
9.	73	29	19	19	140
10.	104	60	45	28	237
11.	25	25	15	23	88
12.	28	17	9	18	72
13.	37	26	9	6	78
14.	90	47	19	24	188
15.	30	23	7	6	66
16.	57	36	15	8	116
Totals	1,191	704	376	361	2,644
Averages:	74	44	24	23	165

The first thing to which these figures direct attention is the wide difference between the numbers in the Freshman and Sophomore classes on the one hand and those in the Junior and Senior classes on the other hand. In the above statement 71.5 per cent of the whole student body is in the two lower classes and 28.5 per cent in the two upper classes.

This paper does not attempt to deal with the causes of student mortality. They are many and well known. It should be remembered, however, that, as the college grows in strength and efficiency, the disparity in numbers between the different classes decreases. For our present purpose, we must accept the figures as shown in the table above. They indicate that we must provide for two recitation sections of Freshmen and, in some cases, for two sections of Sophomores.

The Budget

The college budget is a summary of its expenditures and its income. The expenditures of a college fall into three natural divisions, namely, those on account of administration, instruction and maintenance. The following table presents these items as they appear in our sixteen colleges:

Table 4. The Expenditures of Sixteen Colleges

	Administration	Instruction	Maintainance	Total
1.	\$8,842	\$25,887	\$24,084	\$58,813
2.	8,680	28,530	9,692	46,902
3.	5,636	14,850	15,608	36,094
4.	11,168	28,610	10,012	49,790
5.	4,293	18,697	11,434	34,424
6.	7,845	17,900	10,721	36,466
7.	8,472	16,330	16,723	41,525
8.	4,284	12,089	5,013	21,386
9.	5,136	10,575	11,589	27,300
10.	9,320	18,100	18,569	45,989
11.	5,074	8,900	15,664	29,638
12.	5,776	12,950	17,611	36,337
13.	3,038	13,140	12,224	28,402
14.	4,312	13,550	10,497	28,359
*16.	3,500	14,000	4,283	21,783
<hr/>				
Averages:	\$6,358	\$16,941	\$12,915	\$36,214

*College No. 15 did not report financial statistics completely enough for use in this table.

Under the head of administration should be considered all expenses incurred in the management, government and promotion of the institution. The salaries of all executive officers, their assistants and secretaries, the treasurer, and the librarian with their assistants will be accounted for in this division of the budget. The librarian is not an instructor, unless he is assigned such work in addition to his duties as librarian. Neither is he an employé hired merely to help in the care and operation of the physical plant of the college. He does administer a certain part of the educational plant for the benefit of the students. He seems, therefore, to belong among the administrative officials of the college rather than elsewhere. All expenses for travel by the president and other college officers will be listed under this head, together with expenses incident to meetings of the trustees and the cost of office supplies.

The expenditure for instruction is the most important and should be the largest of the three divisions of college expenditure.

Under the head of expenses for maintenance, all the remaining expenditures of the college may be grouped. A college employé has no administrative functions. He merely helps in the care and operation of the physical plant. In some colleges the title of matron is given to a woman who seems to exercise some of the functions of a dean of women. In so far as such a person performs the duties of a dean, the title of "matron" is a misnomer. A matron is a house-keeper, and, as such, she has no part in the government of the student body.

Even though the resources of the Average College are meager, the president should receive a salary of twenty-five hundred dollars. Such a college should not divert more than this amount from other uses. On the other hand, it will require this amount, in the average college town, to preserve the efficiency of the president. On the ground of sound business policy, therefore, even such a college should pay its president the amount named. If he is the right man for the position, he will accept this salary even though he might be receiving more in some other line of work.

Many colleges make the salaries of deans and registrars larger than those of other teachers who have no administrative duties. A good dean is next in importance to a good president. Some will contend that an hour spent in the work of teaching is equal in dignity and intrinsic value to an hour spent even in the work of the deanship. In theory, this may be admitted. In practice, however, the college which is happy in the possession of a real dean should value him above rubies. With the exception of the deanship, the opinion is now advanced that compensation for extra-teaching services, such as those of the secretary of the faculty and the registrar, should be made by giving relief from an appropriate amount of teaching. The portion of the regular salary which is considered as compensation for administrative services should be listed in the schedule of administrative expenses and the balance under the head of expenses for instruction. The fact that college deans are commonly chosen from among the instructors who have been longest with the institution, and whose academic rank and demonstrated success have brought to them the larger salaries, should not be permitted to obscure the question of policy which has just been stated.

The total expended for instruction is the most interesting and significant item in the entire budget. The ideals, the stage of development and the efficiency of the college may, with some obvious reservations, be judged by this item. Its adequacy and its amount as compared with the other items of expenditure throw much light upon the character and value of the institution.

The graduate is the practical end for which the college exists. The instructor is the principal instrument in forming the graduate. Every other part of the college, therefore, exists primarily to aid the instructor in doing his work. It follows that the first duty of the college is to pay the instructor an adequate salary. This duty rests not only upon the ground of equity, but also on the ground of a

sound business policy. We have not yet reached an agreement with regard to the economically sufficient salary. When we do, whatever the amount may be, no college can justly consider itself completely efficient unless it is paying such salaries.

But what can we say at present about the salaries of college professors? Among the institutions claiming a place in the fraternity of American colleges, the salaries paid those who are described by this time-honored academic title range all the way from a few hundred dollars to a rare maximum of five thousand dollars. In getting some light upon this point, reports were used from some other colleges in addition to the sixteen from which the facts presented in other tables were derived. Among these additional colleges were a few much stronger and older than any of the sixteen. The following table shows the number and amounts of salaries paid in twenty-six typical colleges. No salaries paid to teachers of music, commercial, or normal subjects are included. So far as the reports enabled distinctions, no salaries paid to teachers in preparatory departments are included.

Table 5. Salaries in Twenty-Six Colleges

Number	Amount	Total
2	\$ 700	\$ 1,400
9	800	7,200
20	900	18,000
41	1,000	41,000
23	1,100	25,300
59	1,200	70,800
25	1,300	32,500
22	1,400	30,800
54	1,500	82,000
30	1,600	48,000
15	1,700	25,500
18	1,800	32,400
13	1,900	24,700
32	2,000	64,000
1	2,200	2,200
3	2,500	7,500
		\$513,300
367		
	Average salary	\$1,389

What do the men who receive these actual salaries actually spend year by year upon their living? In order to get some first hand information upon this very interesting point, inquiry was made of a considerable number of teachers in the colleges from which the figures in the table above were obtained. With the request for confidential information was sent a blank in which a theoretic distribution of a salary of fifteen hundred dollars was indicated. Many replies were received. Each was interesting, some were pathetic. Twenty-one contained information which could be used.

Several said in substance what one splendid teacher said: "Both my wife and I inherited a little money, the income of which, if carefully handled, promises to take care of our needs in the future. This is the only thing which has made possible the life we have led." Another said: "Early in my teaching career, I made up my mind that, if I were to continue teaching, I must, in order to make a decent

provision for old age, seek additional income. This I accomplished quite early, so that for many years my expenses have grown far beyond my college income." Many teach in summer schools and institutes. One wrote: "I am now teaching twelve months in the year, three months in the _____ summer school. I shall not be able to make this arrangement long and must soon look for another position." From still another letter the following is taken: "We should do more entertaining, especially the entertaining of students, than we do. I should be attending all the gatherings of the great national associations to which I belong. Before I was married, I did so, traveling sometimes a thousand miles. Now I am unable to do this."

Many other equally interesting and illuminating quotations might be made from the letters received. These, however, are typical. The table now presented shows the theoretic distribution of a fifteen-hundred-dollar salary as outlined in the tentative budget submitted to these teachers, and, in a parallel column, the same items as determined by computing the averages of the twenty-one replies received.

Table 6. A Professor's Budget

	Theoretic	Actual
Rent, or interest on the investment if a home is owned, computed at \$25 per month.....	\$ 300	\$ 366
Household expenses, food, service, laundry, etc., for a family of five at the rate of \$3 per week for each, that is, \$15 per week or \$60 per month, for the year.	720	725
Clothing, \$40 for each of five.....	200	265
Fuel and light.....	75	89
Books, travel, sickness, social expenses, benevolences, in- surance, savings.....	205	498
 Totals	\$1,500	\$1,943

The first fact disclosed by these figures is that each of these teachers, even supposing that he was receiving the theoretic salary of fifteen hundred dollars, would be spending annually four hundred and forty-three dollars more than he was receiving. If the actual average salary of thirteen hundred and ninety-eight dollars be used as the basis of comparison, we must conclude that each of these teachers is paying five hundred and forty-five dollars for the privilege of teaching.

Assuming that, for our present purpose, the salary of a professorship is to be fifteen hundred dollars and that a total of sixteen thousand nine hundred and forty-one dollars, as shown in Table 4, is available for the payment of fourteen instructors, the following would be a possible salary list for the Average College:

Table 7. Salaries for Instruction in the Average College

8 Professors at \$1,500 each.....	\$12,000
4 Assistants at \$1,000 each.....	4,000
1 Instructor	500
1 Instructor	441
 14	 \$16,941

This distribution will be found to accord quite closely with the practice of colleges which expend approximately this amount for instruction. Frequently teachers in such colleges carry more than fifteen hours of classroom work per week.

Philanthropy consists of gifts or service rendered without compensation because of the giver's love for his fellow-men. Most teachers are philanthropists at heart. Teachers in the Average College must be philanthropists since they not only pay for the privilege of teaching, but also work overtime without additional compensation.

The sixteen colleges spent for maintenance an average of twelve thousand nine hundred and fifteen dollars. The distribution of this item will vary greatly on account of location, policy and conditions. Its significance, however, does not consist so much in its distribution as in its amount as compared with the other two main items of expenditure.

The other side of the budget, namely, the income and its sources, now demands our attention. Our information with regard to this part of the budget is most interesting and instructive. It must be remembered that the schedules of the expenditures of the sixteen colleges have been stripped of all nonoperating items, such as the payment of annuities or the repayment of loans. In like manner, all abnormal items, such as loans, have been eliminated from the schedules of income. If the income from student fees, endowments, and donations proved to be less than the total of expenditures, the difference was computed as a deficit. As thus treated, the income statistics of the sixteen colleges are as follows:

Table 8. The Income of Sixteen Colleges

STUDENT PAYMENTS							Total		
	Tuition Rate	Amount	Other Fees	Room Rent	Total	Endow-ment	Dona-tions	Defi-cit	Income
1.	\$60	\$12,575	\$6,751	\$5,142	\$24,468	\$28,858	\$5,487	\$	0 \$58,813
2.	50	6,462	1,650	2,292	10,404	30,822	5,676	0	46,902
3.	60	10,627	2,612	966	14,205	21,186	703	0	36,094
4.	100	28,447	1,549	2,085	32,081	12,565	4,535	609	49,790
5.	40	6,686	868	961	8,515	23,567	2,433	9	34,524
6.	60	12,052	2,170	3,000	17,222	13,162	6,082	0	36,466
7.	40	5,979	2,383	727	9,089	14,184	3,494	14,653	41,420
8.	45	6,218	711	0	6,929	12,393	144	1,920	21,386
9.	50	5,820	1,022	1,977	8,819	12,294	6,187	0	27,300
10.	60	10,357	1,625	2,895	14,877	4,729	13,605	12,778	45,989
11.	38	3,504	2,606	0	6,110	10,495	6,637	6,396	29,638
12.	18	3,174	1,799	2,893	7,866	11,953	15,905	613	36,337
13.	40	4,508	1,100	3,465	9,073	6,306	10,804	2,219	28,402
14.	76	13,862	1,548	0	15,410	5,077	5,199	2,673	28,359
*16.	30	3,883	192	796	4,871	3,291	8,701	4,920	21,783
Aver.	51	8,944	1,906	1,813	12,663	14,059	6,373	3,119	36,214

*College No. 15 did not report its income completely enough for use in this table.

Several interesting and important things are suggested by this table. A college which is adequately capitalized and, therefore, efficient, in the sense in which we use the term, will have but two sources of income, namely, student fees and endowments. It will be noted that thirty-five per cent of the average income of the fifteen colleges referred to in the table above is derived from student fees of all sorts, and that thirty-nine per cent is derived from endowments. The remainder, amounting to twenty-six per cent of the whole, is derived in part from annual donations and, in part, is reported as a deficit.

As a source of income, donations are variable and hazardous. A college dependent upon them for any considerable part of its necessary

income is not in a sound or safe financial condition. Deficits mean debt, and debt always means danger. A college in the condition of the Average College now described is confronted by the absolute necessity of increasing its income from student fees or endowments or both. As the institution grows older and stronger, the annual rate of tuition and other fees may be somewhat increased. There is now a marked movement in this direction among the older colleges. It is doubtful, however, whether the relative amount of income from this source as compared with the total of needed income will be greatly changed. Salaries and other expenditures will probably increase more rapidly than the volume of income from student fees. The college must, therefore, seek larger endowments. This part of the discussion will be found in a later paragraph.

The Plant For convenience, the valuation of the plants and the amount of the endowments of the sixteen colleges will be shown in one table, as follows:

Table 9. Plants and Endowments of Sixteen Colleges

	Plants	Endowments
1.	\$383,197	\$540,791
2.	256,028	501,249
3.	247,551	470,735
4.	477,600	404,920
5.	173,198	343,514
6.	269,900	299,703
7.	251,235	241,396
8.	160,200	235,776
9.	150,315	224,507
10.	247,000	223,403
11.	269,856	182,000
12.	207,984	177,661
13.	228,000	163,000
14.	221,170	126,161
15.	119,000	63,844
16.	127,800	44,064
Averages:	\$236,877	\$265,170

History, circumstances, and the views of the president and his board of trustees will determine the manner in which such a sum as \$236,877 may be invested in a college plant. Recent experience would indicate that the largest single investment should be in one building in which all the educational activities of the institution would be housed. A main building in which there would be classrooms, laboratories, library, chapel, and offices could be secured for one hundred thousand dollars. Two dormitories, not fireproof, could be built for forty thousand dollars each. A heating plant sufficient for such a group of buildings as we are describing could be secured for ten thousand dollars. Assuming that the value of the campus is ten thousand dollars, we would then have thirty-six thousand dollars left to cover the valuation of the library and other equipment. Many very respectable colleges are caring for such a group of students as we are assigning to the Average College while using a plant and equipment of no greater valuation than this.

The Endowment Endowment is the working capital of a college. A partially endowed college is like an under-capitalized business. A hard working and efficient president may keep a partially endowed college going until he secures adequate endowment for it. So may an exceptionally efficient business man build up an under-capitalized business. In either case, however, personality, for the time being, bridges over the gulf between the safe and unsafe condition. Very many times the personality is lacking, or it is unable to bear the burden long enough to bring the college or the business out into the place of safety.

Adequate endowment is the only safety for a college. The Average College, as described above, is not safe, because there is a difference of \$9,492 between its combined income from student fees and endowments on the one hand and its annual expenditure on the other hand. To capitalize this difference at five per cent would require an addition of \$189,840 to the endowment as shown in Table 9, making a total endowment of \$455,010.

Recapitulation Having analyzed, one by one, the elements of the Average College, as derived from our study of the sixteen actual colleges, we are prepared now to present in tabular form a description of this college as follows:

Table 10. The Average College

Students:	
Seniors	23
Juniors	24
Sophomores	44
Freshmen	74 165
Faculty:	
President	1
Librarian	1
Professors	8
Assistants	4
Instructors	2 16
BUDGET	
Income	
From Students:	
Tuition	\$8,944
Other Fees	1,906
Net Room Rents	1,813 \$12,663
From Endowments	13,059
From Donations	6,373
Deficit	3,119
Total of Income and Deficit	\$36,214
Expenditures	
Administration:	
President	\$2,500
Librarian	1,000
Two Assistants to Librarian	500
Dean	0
Dean of Women	0
Registrar	0
Treasurer	500
Stenographer and Secretary	825
Travel	500
Supplies	533 \$6,358

Instruction:	
8 Professors at \$1,500.....	12,000
4 Assistants at \$1,000.....	4,000
1 Instructor	500
1 Instructor	441
	\$16,941
Maintenance:	
Employees—	
Head Janitor.....	\$ 900
Assistant Janitor.....	300
Engineer	900
Fireman	300
Matron	500
Other Employees.....	500
Other Maintenance Expenditures.....	9,515
	\$12,915
Total Expenditures.....	\$36,214
	ASSETS
	Plant
Main Building.....	\$100,000
Dormitory for Girls.....	40,000
Dormitory for Boys.....	40,000
Heating Plant	10,000
Campus	10,000
Library, 11,871 volumes.....	11,871
Other Equipment	25,606
	\$236,877
	Endowment
Actually reported.....	\$265,170
Needed to capitalize deficit.....	189,840
	\$455,010
Total Assets	\$691,887

THE MINIMUM COLLEGE

The Minimum College will differ first of all from the Average College in limiting the student body to one hundred. This is an arbitrary limitation, and it is made in order to prevent the necessity of dividing any class into two recitation sections. It is true that some actual colleges with a student enrollment of approximately one hundred have Freshman classes too large to be kept in one such section. We are proposing, however, to introduce into the Minimum College the conditions and relations which are characteristic of the best colleges. We will, therefore, distribute the student body of one hundred in the proportions found to exist in the better actual colleges.

A study of forty-five such colleges, including practically all the older and more fully developed institutions, shows that the average distribution of students among the four classes in these institutions was as follows:

Seniors	17.7 per cent
Juniors	19.9 per cent
Sophomores	25.9 per cent
Freshmen	36.5 per cent

If these percentages were followed, the distribution of one hundred students would be as follows:

Seniors	17
Juniors	20
Sophomores	26
Freshmen	37

Thirty-seven Freshmen would make a larger recitation section than would be desirable, but a hard-working teacher might handle it. Certain of the forty-five colleges showed a slightly more uniform distribution of students. The classification of students in four well-known colleges and the corresponding distribution of the one hundred students in the Minimum College is as follows:

Amherst,	{	Seniors,	18.6 per cent	19
Hamilton,		Juniors,	23.5 per cent	23
Reed,		Sophomores,	24.3 per cent	24
Trinity,		Freshmen,	33.6 per cent	34

This distribution would probably be workable without serious difficulty, and it will, therefore, be adopted for the Minimum College.

In accordance with relations already discovered, the faculty of the Minimum College, including the president and librarian, will be fixed at ten. The president and the librarian will do no teaching. The number of instructors will, therefore, be eight. Fifteen periods per week will be considered a full teaching schedule. If each of the eight instructors were carrying a full schedule, a program of one hundred and twenty hours per week would be offered to the students. Fifteen hours per week will be required of each student. With no electives or irregularities, sixty hours per week would provide for the needs of the students. If the deans, the secretary, and the registrar are relieved of sufficient teaching to constitute an equitable compensation for the administrative work they are called upon to do, there would still be some teaching hours available to provide for irregularities and electives.

What has already been said of the entrance requirements and the curriculum will be considered to be a sufficient discussion of those subjects. Within the limits indicated on an earlier page, each Minimum College would vary its curriculum to accord with its particular ideals and conditions.

In constructing the budget of the Minimum College, we will follow, in the main, the budget already constructed for the Average College. Where that budget falls short of the things deemed necessary, we will make the items what we believe they ought to be.

A total of \$7,325 is computed as necessary to cover administrative expenses. The president's salary is fixed at \$2,500 per year. A competent librarian may be found among the graduates from several good library schools at a salary of \$1,000. Two student assistants at salaries of \$250 each will give the additional help needed in the library. Some responsible member of the board of trustees may act as treasurer, but the routine work of the treasurer's office may be performed by a competent man who will combine the work of assistant treasurer with that of office secretary. He should be paid a salary of \$1,500 per year. One good stenographer at a salary of \$75 per month for eleven months will complete the office force. The necessary expense for travel by the president and other officials of the college, together with the cost of office supplies, will complete the expenditure for administration.

The salary of a professor is fixed at \$1,500 per year. The college will require the services of eight instructors, each of whom should have

full academic rank. The total expenditures for instruction would, therefore, be \$12,000.

The cost of maintenance for the Minimum College will be relatively greater than that for the Average College. The cost of adequate annual maintenance will be far greater per student for a group of one hundred students than for a group of five hundred students. In the Average College approximately thirty-six per cent of the total expenditure is on account of maintenance. On the basis of the amounts already fixed for administration and instruction, this relation would indicate an item of a little over ten thousand dollars for maintenance. Since the amount expended by the Average College is admittedly less than is desirable, this item in the Minimum College will be increased somewhat in order to provide more adequately for the needs of the institution as well as to bring the total to a convenient round sum. By assigning \$12,675 to maintenance, the total expenditure of the Minimum College is made \$32,000.

The income of the Minimum College, it is assumed, will be fully provided for by student fees and endowments. We know that there will be a certain percentage of loss in the collection of tuitions and other student fees. Ten per cent would probably be a safe discount to allow on this account. Assuming a tuition fee of \$60 per year and a room rent of \$1.50 per week, we may estimate the income from tuitions at \$5,400, room rents at \$3,500, and other fees at \$1,500, that is, a total of \$10,400 from student fees. This will leave \$21,600 to be derived from endowments, and this, in turn, indicates an endowment of \$403,200.

A group of buildings similar to that already assigned to the Average College will be required. They may be of somewhat better construction and, perhaps, with additional expense, may be better adapted to their uses. These differences will be sufficiently indicated by the greater cost indicated in the tabular description of the Minimum College now submitted:

Table 11. The Minimum College
Students

Seniors	19
Juniors	23
Sophomores	24
Freshmen	34 100

Faculty

President	1
Librarian	1
Professors	8 10

Expenditures

Administration:	
President	\$ 2,500
Librarian	1,000
Two Assistants in Library, \$250 each	500
Treasurer	0
Assistant Treasurer and Office Secretary	1,500
Stenographer	825
Travel	500
Office Supplies	500
	<hr/>
	\$7,325

Instruction:		
Eight Professors at \$1,500 each.....	\$12,000	
Maintenance	12,675	\$32,000
Income		
From Students:		
Tuiti ⁿ ons	\$5,400	
Room Rents.....	3,500	
Other Fees	1,500	\$10,400
From Endowments.....	21,600	\$32,000
Assets		
Plant:		
Main Building.....	\$150,000	
Dormitory for Boys.....	50,000	
Dormitory for Girls.....	50,000	
Heating Plant.....	25,000	
Campus	25,000	
Library, 15,000 volumes.....	15,000	
Other Equipment.....	35,000	\$350,000
Endowment		<u>432,000</u>
Total Assets.....		\$782,000

THE EFFICIENT COLLEGE

The Efficient College will be constructed in the same manner in which the Minimum College has been constructed. For an assumed student body of five hundred, a faculty and equipment will be provided capable of giving to such a body of students all that a college ought to give them. This does not mean that more money might not properly be expended in the work of the college. For example, fireproof buildings are not, in every case, included in the estimates of the cost of buildings. Fireproof construction is desirable, but, so long as buildings do not burn down, they serve the educational purposes of the institution equally well whether they are fireproof or not. The salaries mentioned are not as large as they ought to be. They are, however, as large as the conditions and the sentiment in the greater part of the country demand. The purpose of the Efficient College is to provide all the things that are essential while leaving many things which are very desirable still to be attained.

In fixing the number of the student body at five hundred, there is no thought of making that the limit of numbers for college work. There is a wide difference of opinion with regard to the desirable limit of numbers in a student body. Probably none would contend for a number larger than one thousand. Many would be willing to say that five hundred is the best number. No doubt, most educators will agree that certain conditions of unity, homogeneity and intimacy should characterize a college group and that these conditions indicate a certain limit as to numbers. Certain personal relations between teachers and students should exist and these also indicate some limitation as to numbers. Chiefly, however, for the practical purpose of getting a starting point from which to develop the Efficient College, we will assume a student body of five hundred. Such a student body distributed among the four classes in the proportion observed in the Minimum College would indicate the enrollment which will be shown in the tabular statement at the end of this part of the discussion.

A faculty of fifty, including the president and the librarian with the librarian's assistants, is assumed for the Efficient College. The best colleges usually have the largest number of professors as compared with the number of the student body. They also have the largest proportion of instructors of full academic rank. One instructor to every ten students, and as many as possible of the instructors of full professorial rank would seem to be the ideal toward which to strive.

The president of such a college as the Efficient College should receive a salary of five thousand dollars. When the college is able to do all the desirable things as well as all the necessary things, the president's salary may properly be advanced.

The Efficient College will need the services of a treasurer who will devote all his time to the work of his office. With the advice of a finance committee, he will care for the funds of the institution. He should be a man whose abilities and responsibilities place him on the same footing with the professors, and his salary should be the same as theirs.

The salary of professors in this college should not be less than \$2,500 per year. It is doubtful if, for our present purpose, we can assign larger salaries than this to college professorships. Assistants or associates may receive \$2,000 and instructors smaller amounts up to \$1,500.

Expenditure for maintenance may be rather elastic in amount. Liberal appropriations should be made for the library and laboratories. The value of an institution is determined to a very considerable degree by the adequacy of these expenditures.

The income of the Efficient College, like that of the Minimum College, should be derived entirely from the proceeds of student fees and endowments. A tuition fee of \$100 is assumed. Few of the colleges of the Middle West have yet felt able to charge as much as this. The tendency, however, is in this direction.

We are now ready to present a tabular picture of the Efficient College as follows:

Table 12. The Efficient College

Students:	
Seniors	95
Juniors	115
Sophomores	120
Freshmen	170
Faculty	50
Budget	
Expenditures:	
Administration:	
President	\$ 5,000
Librarian	2,500
First Assistant in Library	1,500
Second Assistant in Library	1,000
Treasurer	2,500
Supt. of Grounds and Buildings	2,000
Stenographers, two at \$75 per month, 11 months	1,650
Travel by President and other Officials	1,000
Office Supplies	1,500
	\$18,650

Expenditure:		
Instruction:		
22 Professors at \$2,000	.....	\$55,000
16 Assistants at \$2,000	.....	32,000
8 Instructors at \$1,500	.....	12,000
		\$99,000
Maintenance:		
Engineer	.....	\$ 1,500
Firemen, two	.....	1,200
Head Janitor	.....	1,500
Assistant Janitors, four	.....	2,400
Matron	.....	1,000
Other Employees	.....	1,500
Other Maintenance Expenses	.....	40,000
		\$49,100
Total Expenses	.....	\$166,750
Income:		
Students' Fees:		
Tuition	.....	\$ 45,000
Room Rents, net	.....	6,000
Other Fees	.....	5,000
Endowments	.....	\$ 56,000
		110,750
Total Income.	.....	\$166,750
Assets		
Plants:		
Main Building, Administration and Recitations	.....	\$150,000
Library Building	.....	100,000
Chapel	.....	50,000
Laboratory	.....	75,000
Laboratory	.....	75,000
Laboratory	.....	75,000
Boys' Dormitory	.....	50,000
Boys' Dormitory	.....	50,000
Girls' Dormitory	.....	50,000
Girls' Dormitory	.....	50,000
Commons	.....	25,000
Gymnasium	.....	50,000
Heating Plant	.....	50,000
Equipment	.....	50,000
Campus	.....	50,000
Library, 25,000 volumes	.....	25,000
President's House	.....	10,000
Endowment	.....	\$ 985,000
		\$2,215,000
Total Assets	.....	\$3,200,000

An Objection Some objection was voiced a year ago to the use of the term "Efficient" in describing the ideal college which we are discussing. Similar objections have been expressed in correspondence. No other good name has, however, been suggested. Moreover, it seems that objection to the term "Efficient" grows partly out of misunderstanding and partly out of a groundless fear. As used in this paper, the term "Efficient" is a technical term and should be understood in accordance with its own definition. There is no implication that colleges which fail to meet the tests of efficiency as set forth in the discussion are not good colleges. Harvard was probably a hundred years old before it began to be efficient, but no one will deny that, during all that time, Harvard was a very good and valuable college.

No worthy college will suffer by facing facts. It will suffer rather by trying to pose as what it is not. If it convinces its friends that it is already efficient, it releases them from further obligation to aid it. If it has a reason for being and is striving worthily to fulfill its mission, its very "inefficiency" is its strongest argument in getting more money.

What do we mean by college efficiency? Simply that all the forces of the institution are working adequately and with the least possible waste to accomplish its chief ends. Can this be done when the library and laboratories are inadequately equipped and supported or its teachers underpaid and overloaded with work? These are prevalent conditions in many splendid colleges, which, however, are not efficient colleges.

**The
Student
Hour**

A study of college efficiency very soon suggests the need of some unit of measurement by the use of which costs may be compared. For this purpose the student hour is the best unit to use. A student hour is the hour spent by any one student under the instruction of a professor. If there are twenty-five students in the class during the period, twenty-five student hours are accounted for. If the class meets five times each week, one hundred and twenty-five student hours are accounted for during each week. If the semester contains eighteen weeks and the class recites five times each week, two thousand two hundred and fifty student hours are accounted for during the semester. If this class is heard by an assistant professor whose salary is two thousand dollars per year and whose teaching schedule contains fifteen periods per week, this teacher is giving one-third of his time during one-half of his year in order to account for two thousand two hundred and fifty student hours. If no other elements of cost than the salary of the instructor are taken into account, the cost per student hour for such a subject would be 14.8 cents. Perhaps this computation may be shown a little more clearly as follows:

Semester Weeks	Hours per Week	Students in Class	Student Hours
18	5	25	= 2,250
Salary of Instructor	One-Third of Schedule	One-Half of Year	Student Hours
\$2,000	÷ 3	÷ 2	÷ 2,250 = 14.8 cents

If the subject is an elective with five students in the class which meets only twice a week and is in charge of a professor on the full salary of two thousand five hundred dollars per year, the cost per student hour will be as follows:

Semester Weeks	Hours per Week	Students in Class	Student Hours
18	2	5	= 180
Salary of Professor	Two-Fifteenths of Schedule	One-Half of Year	Student Hours
\$2,500	÷ $\frac{1}{15}$	÷ 2	÷ 180 = 92.6 cents

To obtain an accurate estimate of the cost per student hour, a pro rata portion of the cost of administration and maintenance should be added to the cost of instruction. This would nearly double the costs indicated above.

It must not at once be concluded that efficiency means the elimination of the elective courses in which a few students recite but a few times per week. It may be that such courses are worth all they cost. The college should know, however, what they cost and be able to give a good reason for continuing them at a cost relatively many times greater than that of other courses.

Records Efficiency requires much more careful keeping of records than many college administrations yet realize.

The above computation of the cost of a student hour is based upon the catalogue statement of requirements. It is not expected that every class announced to meet five times a week during a semester of eighteen weeks will invariably meet ninety times during the semester. There may be good reasons why some recitations should be canceled. There will be good reasons why some students may be excused or allowed to take cuts. Without the regular and accurate keeping of records, however, the losses through the unnecessary canceling of recitations or the careless granting of excuses will become far greater than the college administration intends. The records should show for each course given, how many recitations scheduled, how many held, how many students enrolled and how many present at each recitation.

THE EFFICIENT COLLEGE—A STUDY OF INCREMENTS
DEAN CHARLES NELSON COLE,

Oberlin College

In discussing the paper presented on this subject last year by Dr. French, I suggested that it might be well, instead of denominating any particular size of college as the "Efficient College," in contrast to the "Minimum College," to try the plan of building upon a carefully constructed unit, known as the minimum college, a series of standards for larger institutions of various size, each to be regarded as equally "efficient" with any of the others. Perhaps as a merited judgment for the temerity of the suggestion, the task of attempting to formulate a series of such standards has been assigned to me today. So far as I know, there has been no previous effort of this sort.

Before we undertake to deal with the larger units, it may be well to look for a moment longer at the primary unit which we are calling the "Minimum College." By this term I understand that we mean, not to describe the smallest institution we think should be allowed to bear the name of college, but rather an institution having such admission requirements, curriculum, standards for graduation, teaching staff, administrative organization, endowment and physical equipment as render it capable of doing acceptable college work in every respect for an arbitrarily fixed minimum number of students. The object in determining such a standard is three-fold: First, to bring to bear what influence we can to deter the founding of more new colleges with hopelessly inadequate resources; second, to indicate to existing colleges of approximately the specified size at what points, in the judgment of

associations, boards or individuals accepting this or a similar standard, they fall short of really adequate preparation for their work, and so to incite and, if possible, to assist them to secure more satisfactory equipment; third, to make it plain to institutions trying to do work entirely beyond their means and even their prospects that that is the case, and so to assist, as far as we may, in bringing about needed consolidations, reductions in grade, or other readjustments necessary to do away with hopeless travesties of collegiate work. The ultimate aim is thus the promotion of genuine, universally effective college work; it is not at all the purpose to make the way needlessly harder for any struggling college.

In view of this definition of the minimum unit adopted for this study, the question naturally arises whether the misunderstanding so often occasioned by the name may not be lessened by some modification of the term. I am not sure that it can be, but it may be worth while to suggest the use of a more completely explanatory, even if cumbersome name for the unit, such as, for example, the "Minimum Standard College," or, perhaps better, the Standard College of One Hundred. The other units, made by adding increments of various sizes to this unit, would then be simply larger standard colleges, the standard college of two hundred, three hundred, etc. Institutions below the requirements of the standard nearest their size would not then be rated as "inefficient" colleges, even by implication, but might well be excellent institutions, though falling below the desired standard in one or even several respects.

THE STANDARD COLLEGE OF ONE HUNDRED

As far as the terms of this minimum standard are concerned, I find myself in substantial agreement with most of Dr. French's ideals. A body of 100 students seems, quite aside from the fact that that number makes a desirable unit, the absolute minimum for which it is advisable to attempt to maintain as expensive an affair as a well equipped modern college. For that number a faculty of ten is sufficient, provided there may be secured from it teaching to the extent of not less than the full time of eight instructors. This will not be possible, however, with the allowance that must be made for a registrar, and, if such an officer seems necessary, a dean, unless the president and librarian teach on part time. There is surely no occasion for a librarian to spend all his own time and five hundred dollars' worth of student time on a library of 15,000 volumes. As for the president, it is, of course, easily possible, but, in my judgment, wholly unnecessary for him to spend, except in the exceptional crisis, the whole of his time in administering a college of ten teachers and 100 students. As I pointed out in the discussion of Dr. French's report last year, there are advantages for him, no less than for the institution, in his carrying on some regular teaching. In partial confirmation of these contentions I point to the fact that in Oberlin College, an institution of 1,500 students, with a library of 165,000 bound volumes and 140,000 unbound volumes and pamphlets, the president and librarian both teach regularly, the president six hours a week, the librarian an average of three. Many similar cases could doubtless be easily found.

The standard for admission, a minimum of fourteen units, and for graduation, 120 semester hours, are now the practically universal standards. It should be noted, however, that this standard curriculum, if made up almost wholly of rigidly required courses, comes far short of making an acceptable college course today. It is quite possible, by employing the device of alternating courses in some such way as I described last year, to provide a major subject in each student's curriculum and a considerable range of elective studies, even with the teaching staff proposed for the minimum college.

The essentials of the budget proposed for the minimum college seem well founded. Some additions, subtractions, and rearrangements would certainly be needed for every individual institution, but an average expenditure of approximately \$7,500 for administration, \$12,000 for instruction, and \$12,500 for maintenance seems reasonable. The proportion for instruction, allowing only \$1,500 salaries for the whole teaching staff, is, of course, unduly low, but this can hardly be obviated in a college reduced to its lowest terms. It is at this point that the strongest need for improvement with growth is found. On the income side the estimate of \$1,500 for "Other Fees," an average of fifteen dollars for every student, seems excessive. The multiplication of extra fees for all sorts of things connected with the college is an evil and a source of continual question and exasperation. It is so desirable to keep such fees within the smallest limits that it would probably be advisable to reduce the estimate for them to an average of not more than five dollars for each student, and to make up the difference either by raising the general charge for tuition or by increasing the allowance for income from endowment. The problem of income from rent of rooms is, of course, a vastly different one in different institutions. The estimate of \$3,500 seems as good a general figure as any other, since it must be understood that a college which either rents no rooms or makes no profit from that source will make up the difference from one of the other sources of income, while institutions in which the yield from this source is greater than this estimate will correspondingly reduce the other items.

Under the head of "Assets," the endowment necessary to capitalize the difference between expenditure and other sources of income at five per cent is \$432,000, which rises, of course, to \$452,000 if an extra one thousand dollars is transferred from "Other Fees" to this source. The amount estimated for the plant, \$350,000, seems very large, as things go, but it is not really more than adequate equipment demands. It might be reduced temporarily by postponement of some of the items. For example, in a town able to provide reasonably satisfactory rooming places for men, one of the dormitories might be delayed for a time, though I think there is no question that the ideal arrangement is for the college itself to house all its students. Other details in this estimate for the plant will, of course, require much readjustment for individual cases, but the sum total cannot, I believe, be safely reduced.

On the basis of these calculations the total amount of property needed for the minimum standard college, plant and endowment, becomes more than \$800,000. Less than half of the fifty-two colleges

whose figures were tabulated in the former editions of Dr. French's report, irrespective of size, have that amount, and none of the sixteen colleges whose statistics were used in making the estimate for the "Average College" in his present report has much more than half as much. These facts do not seem to me to settle the question. It is true that in the making of standards some measure of guidance must always be obtained from prevailing practice, but it is even more true that in practically all colleges the existing amounts and proportions of property have been determined more by accident than by impartial, objective consideration of what was really needed even in the given circumstances. This being the case, we ought not to feel bound to follow existing standards too closely.

LARGER STANDARD COLLEGES

Assuming that the minimum standard college should have at least 100 students, ten teachers and officers, a minimum requirement of fourteen units for admission and 120 semester hours for graduation, an annual income and expenditure of \$32,000, an endowment of approximately \$450,000, and a plant worth \$350,000, we pass to the question: "What should be the increases in these figures for equally efficient, or better, increasingly efficient colleges of larger size?" That is not an easy question to answer, even if the minimum unit is fully accepted. Not only must the proportions of many of the items vary in institutions of the different sizes, but strong differences of judgment will be found in regard to these proportions for the institution of any given size. The estimates here offered are accordingly submitted with becoming diffidence, merely as an initial step toward the determination of suitable standards that it is hoped will be worked out and will come in time to be generally accepted. The standards decided upon for the attempt here made are for colleges of 200, 300, 500, 750 and 1,000 students.

TEACHING STAFF

That the proportion of teachers to students should not be reduced as the institution grows is generally admitted, at least in theory, though the temptation to let crowding numbers increase the size of classes too far before division into sections is resorted to is usually irresistible. Even when additional sections are formed, the tendency is to put them into the charge of younger and more inexperienced teachers than the college feels wholly warranted in using, though it is, of course, clear that if the larger college is not to prove inferior to the smaller one in its instruction, it must have not only as many teachers to each hundred students, but teachers not inferior, on the average, in ability, training and experience to those of the smaller institution. As the college grows larger and stronger, however, it will become more and more possible for teachers in its lower grades to equal or surpass, in average of effectiveness, the full professors of the minimum college. It is quite feasible, that is to say up to a certain point, to bring assistant professors and instructors, with finer training and larger salaries than could be secured for the same rank in a smaller college, into the staff of the larger college without detracting from the comparative

effectiveness of its teaching. It will still be best, of course, to keep the proportion of full professors as large as possible. With these ideals in mind we may suggest as a general principle to govern the growth of the teaching staff in standard colleges larger than the minimum that there should be added not less than the equivalent of one full-time teacher for every twelve students added, and that while there will be progressive increase in the actual number and proportion of teachers of the lower ranks, a decided predominance of the higher ranks should be maintained.

Working on this principle we may venture to specify as the minimum acceptable faculty for a college of 200 students seventeen teachers, or their equivalent, on full teaching time, ten to rank as full professors, five as assistant professors, two as instructors; for the college of 300, a faculty of twenty-six, or their equivalent on full teaching time, sixteen as full professors, seven as assistant professors, three as instructors; for the college of 500, a faculty of forty-four teachers, or their full-time equivalent, twenty-eight full professors, eleven associate and assistant professors, and five instructors; for the college of 750, a faculty of sixty-four, or their full-time equivalent, forty-two full professors, fifteen associate and assistant professors, seven instructors; and for the college of 1,000, a faculty of eighty-five full-time teachers, fifty-nine professors, seventeen associate and assistant professors, and nine instructors.

ADMINISTRATION

The field here is much less distinctly defined than in instruction. In the present-day college there is much variation, not merely in the number and functions of officers, but in the nature and extent of the administrative field, in the amount and character of the administrative work undertaken, even in colleges of approximately the same size and general character. In these circumstances it is probably the part of wisdom not to attempt to define too precisely, but to indicate somewhat broadly the ground to be covered. The general principle would seem to be that the teaching staff should more and more be relieved of routine administrative drudgery, and yet that all forms of administration should be managed with increasing thoroughness and effectiveness, as the college grows larger and stronger. The tendency, as in instruction, unfortunately, sets strongly the other way, and often results in loading officers considerably beyond their capacity for vitally effective work before relief is provided. To avoid this danger, it would seem necessary to add, as the college grows, at least, the equivalent of one full-time officer for every hundred students added. The estimates to be offered below are made upon this basis.

If the allowance of an equivalent of three officers for the minimum college is not unreasonable, at least one more will be needed for the college of 200. Not less than four will surely be required to care for the work that in larger institutions devolves upon the president, the treasurer, the librarian, the dean or registrar, the dean of women, and the superintendent of buildings and grounds, however these duties be distributed among the persons who perform them. The separately designated offices will need to be at least those of the president, the

treasurer and the registrar and, perhaps, the librarian. The duties not carried by these will have to be distributed among teachers, for whom some reduction of the teaching schedule will be made in consequence. In place of the registrar's office, a dean on part time might be appointed if preferred, with an assistant on full time.

In the college of 300, yet another officer on full time, or the equivalent of one, making five in all, should be needed. At this point, if not earlier, it would probably be necessary to set off the work of the dean of women on an independent basis, and to entrust it to an officer whose primary work should be in that field instead of in teaching. There would still be certain kinds of work, as, for example, that of the dean of men, the superintendent of buildings and grounds, and, perhaps, the librarian, to be carried by other officers and teachers on part time, with the assistance, of course, of helpers at smaller salaries.

In the college of 500 there probably ought to be not less than the equivalent of eight full-time officers. Of specially designated officers there should probably be, at least, a president, a treasurer, a dean, a dean of women, a registrar, a librarian and a superintendent of buildings and grounds. Administrative functions not carried by these officers could either be assigned to another official appointed to the place of greatest need, as, for example, a secretary, or a dean of men; or they could be allotted to committees of faculty members or carried by individual teachers in lieu of a part of the normal teaching schedule.

To provide for a college of 750 the equivalent of at least ten full-time officers would be needed. In addition to those just named for the college of 500, at least a secretary and a dean of men (as distinguished from the dean of the college or of the faculty) would seem to be necessary.

The college of 1,000 would need all the officers so far named, with assistants at various points of heaviest pressure in the particular institution. An assistant to the president, an assistant dean or deans of the college, assistant secretary, an assistant registrar (or an examiner or recorder), an assistant dean or deans of men, an assistant dean or deans of women—any or all of these officers might be required. Not less than the equivalent of full time from twelve persons is really required to carry adequately the administrative work of a college of this size.

ADMISSION REQUIREMENTS AND CURRICULUM

It would not be desirable, even if it were feasible, to bring about uniformity of requirements for admission and graduation beyond the universally accepted minima already noted. The curriculum of each college will be determined in character by the aims and ideals of the institution, and will be richer and more comprehensive as the college grows larger and stronger. The admission requirements will be determined, as far as they are specified at all, by the nature of the curriculum that is to follow. This being the case, further discussion of these topics does not seem to be needed here.

EXPENDITURE

The items of expense may be assumed to be three, as in the minimum standard college—instruction, administration, maintenance. It

does not seem possible to deduce fixed principles to govern the ratio of these items to each other or the amount to be spent on each in the college of any of the several sizes, because each item is necessarily governed so largely by local conditions. All that can be done in this tentative survey, it would appear, is to draw up a set of estimates to serve as a statement of fairly good conditions in localities of average standards and requirements. Adjustments and redistributions for individual colleges, which will invariably be necessary, will then be based upon a comparison of conditions in the places concerned.

In estimating the expenses for instruction, the need of greater relative expenditure at this point in colleges larger than the minimum may be urged once more. The estimate for instruction in the minimum college is not regarded as by any means sufficient—it is simply the smallest amount that it seems possible to consider in any sort of standard. Larger colleges should pay better salaries, not simply because they are larger, but because they have, or should have, the ability to do now what we may hope the lesser institutions will in time come to be able to do also. If, then, \$12,000 for eight teachers, all professors, at \$1,500, is the irreducible minimum for the smallest institution, we may venture to estimate minimum for the larger ones as follows: For the college of 200 students, \$27,500, divided roughly into \$18,000 for ten professors, \$7,500 for five assistant professors, and \$2,000 for two instructors; for the college of 300, \$45,500, allowing \$32,000 for sixteen professors, \$10,500 for seven assistant professors, and \$3,000 for three instructors; for the college of 500, \$99,000, of which \$70,000 might be paid to twenty-eight professors, \$22,000 to eleven associate and assistant professors, and \$7,000 to five instructors; for the college of 750, \$174,000, allowing approximately \$126,000 for the salaries of forty-two professors, \$37,500 for those of fifteen associates and assistant professors, and \$10,500 for those of seven instructors; and for the college of 1,000, \$262,500, divided into approximately \$206,500 for fifty-nine professors, \$42,500 for seventeen associate and assistant professors, and \$13,500 for nine instructors.

(At this point the speaker was interrupted by a questioner and the following discussion ensued:)

QUESTION: May I ask the question, what ratio you would put into professorships?

DEAN COLE: I have tried in each case to make the ratio a little under twice the number of the other two grades combined. That is, in the forty-four teachers for the college of 500, I have taken twenty-eight full professorships and sixteen in the other two grades.

QUESTION: Do we understand the same thing by professors, associate professors, assistant professors and instructors? Is there any general definition?

DEAN COLE: I don't know whether we can make a general definition. The practice is fairly universal, I think, by which the teacher of lowest rank in actual, independent charge of classes is an instructor, the one next above him an assistant professor, and then, if there is an additional one before the full professor, an associate professor. As I understand it, the assistant professor is nearer to the

instructor, as a rule, and the associate professor is nearer to the professor. That is the way I have intended to use those terms.

QUESTION: If the sections are to be the same size and you are basing it upon an approximately similar division, and if we are dealing with the same degree of efficiency, why give a larger salary because of one thousand students than when we have two hundred or three hundred? Because the college can afford it, or to get efficiency?

DEAN COLE: Because the college is growing larger and ought to grow better.

QUESTION: May I say, then, that you are working with a more efficient college with seven hundred and fifty students than you have with two hundred?

DEAN COLE: Precisely, as far as minimum standards are concerned?

DR. CRAWFORD: Why do you make a statement of that kind, that because a college grows larger it ought to grow better? What is back of that? I am asking that in all sincerity.

DEAN COLE: Well, would it be a desirable situation for Yale University, for example, because we desired to keep all institutions on substantially the same grade, not to try to be better, to have abler men on its teaching force, to spend more on equipment, and to give really better instruction than smaller, less highly endowed institutions?

DR. CRAWFORD: Well, what I had in mind is, why wouldn't it be well for us to recognize that an institution has a right to be smaller and to be just as good as a small college can be? Now, Haverford, in my judgment, the best college in the state of Pennsylvania, has never had more than a hundred and seventy-six students and in a rating some years ago Haverford was found to pay the largest salaries paid to any faculty in any institution in the United States of America, with the possible exception, I think, of one university. Now, it seems to me that in any scheme we ought to recognize the divine purpose, if I may so speak of it, of an institution like Haverford, that has the courage to keep to a small number, and will pay its professors big salaries. I would like your judgment on this point.

DEAN COLE: I haven't the slightest quarrel with President Crawford on that proposition. What we are doing here is to try to fix a minimum for these several grades. The point I am urging is that the institution ought not to grow larger than that without growing better. If it determines to remain at the same point and grow better, all honor to it.

DR. CRAWFORD: Then, there is no indication whatever in your remarks that because the college grows larger it necessarily grows better.

DEAN COLE: No, that doesn't follow. It ought to, I think, but as a matter of fact it doesn't.

QUESTION: Replying to this remark which you have made, I suppose we are warranted in saying that Oberlin at this time, having one thousand students, would be a much more efficient college if it had fifteen hundred students.

DEAN COLE: No, not at all. We have stopped at a limit of one thousand and are not going beyond that number until we get up to

what we judge a reasonable expenditure and equipment for a college of that size. Oberlin is not so good a college as we want it to be for its one thousand students. Before Oberlin has fifteen hundred students in its college of arts and sciences, if it ever does, it will be a much better college than it is now.

QUESTION: And you feel that additional salaries are necessary with the increased duties?

DEAN COLE: Yes.

QUESTION: I think I have read somewhere statistics from our Government that a larger percentage of graduates of colleges with less than five hundred students had become distinguished than from colleges of more than five hundred students. Is that true?

DEAN COLE: I do not know.

QUESTION: I think that is so. If so, is not your assumption that the larger a college is, other things being equal, the more efficient it will be, isn't that assumption wrong?

DEAN COLE: That assumption is quite possibly wrong, under present conditions, but it is not my assumption. Institutions sometimes grow larger without becoming really more efficient, because they let their teaching force become less effective, their administration less thorough, and what they give their students individually and generally less good than in the smaller colleges. That is what we are trying to correct, by the establishment of minimum standards for the various sizes of colleges. The tendency of such standards will be to keep the institution small until it becomes enough better to deserve to grow larger, if it wishes to do so. Instead, therefore, of contending that the larger a college is, the more efficient it is, we are trying to induce colleges to accept the view that they have no right to grow larger until they surpass reasonable minimum standards established for institutions of their present size.

(Report continues)

The expenditure for administration is much less capable of being brought under definite principles and rules than even that for instruction. Not only are there the divergences of views already mentioned as to the number and functions of officers, but there are equal differences of opinion as to the value of the several offices, both absolutely and in relation to each other. It seems a futile effort to mark out with any degree of precision the details of administrative expense. The best plan will probably be to suggest a total for each class of institutions, basing it upon the principle of a slowly decreasing ratio, as the institution grows, to the cost of instruction. On this plan we may suggest \$10,000 for the college of 200, \$15,000 for the college of 300, \$27,000 for the college of 500, \$40,000 for the college of 750, and \$60,000 for the college of 1,000.

Cost for maintenance, also, must vary widely, even when the size and character of the plant are essentially the same, with differences of locality and in the degree of efficiency of management. Here again all that is feasible is to indicate minima applicable to very favorable situations, and leave adjustments to be based upon the degree of difference between the places compared. Such minima

would in all probability not be less than \$20,000 for the college of 200, \$30,000 for the college of 300, \$50,000 for the college of 500, \$80,000 for the college of 750, and \$120,000 for the college of 1,000.

INCOME

The items under this head are tuitions, other fees, room rents and interest on endowment. None of these is subject to a fixed rule except the income from endowment. This must, if the institution is to come out whole at the end of the year, make up the difference between the other items of income and the whole of the expense. Tuitions become fairly definite, of course, as soon as the rate is fixed, but there can be no general rule about that. A loss of roughly ten per cent, for tuition refunded, failure of collections, etc., seems a fair estimate. Assuming for the college of 200 a charge of sixty dollars, the income from that source will be \$10,800; for the college of 300, at seventy-five dollars, with a somewhat smaller loss, it will be \$20,500; for the college of 500, 750 and 1,000, with a charge of one hundred dollars and a similar rate of loss for each, it will be \$45,000, \$67,500 and \$90,000 respectively. From other fees, if a maximum average rate of five dollars be fixed, the respective receipts of the five standard colleges will approximate \$1,000, \$1,500, \$2,500, \$3,250 and \$5,000. Room rents are, of course, wholly unsusceptible of being reduced to rule. Mere guesses at the amounts where dormitories are conducted for income might be put at \$7,000 for colleges of 200; \$10,500 for colleges of 300; \$17,500 for colleges of 500; \$26,250 for colleges of 750, and \$35,000 for colleges of 1,000. Acceptances of these figures for expense and income then involves reckoning the receipts from endowment funds at \$38,700 for a college of 200, \$58,250 for a college of 300, \$111,000 for the college of 500, \$197,000 for the college of 750, and \$312,500 for the college of 1,000.

PROPERTY

The minimum endowment necessary is, of course, exactly fixed by the amount of income it is necessary to secure from that source. Calculating at five per cent on the figures already given, the college of 200 will require an endowment of \$774,000; the college of 300, an endowment of \$1,165,000; of 500, \$2,220,000; of 750, \$3,940,000; of 1,000, \$6,250,000.

The value of the plant is another item that will vary greatly, as has already been noted, with the location of the school. Estimates on this score are valueless except as minima. Taking this view, we may suggest \$500,000 as the smallest amount likely to prove really satisfactory for the college of 200; \$750,000 for the college of 300; \$1,000,000 for the college of 500; \$1,750,000 for the college of 750, and \$2,400,000 for the college of 1,000.

On these estimates the total amount of property, combining the endowment and value of the plant, becomes \$1,274,000 for the college of 200; \$1,915,000 for a college of 300; \$3,220,000 for a college of 500; \$5,690,000 for a college of 750, and \$8,650,000 for a college of 1,000.

RECAPITULATION

It may be worth while now to put together for each institution the minima arrived at in this way for it. On the basis of the considerations so far presented, they would be as follows:

A standard college of 200 students is one that has a faculty of twenty-one, giving it the equivalent of seventeen full-time teachers and four full-time administrative officers; an income of \$10,800 from tuitions, \$1,000 from other fees, \$7,000 from room rents or other sources, and \$38,700 from endowment; an expenditure of \$27,500 for instruction, \$10,000 for administration and \$20,000 for maintenance; a productive endowment of \$774,000 and a plant worth \$500,000, making a total property of \$1,274,000.

A standard college of 300 students should have a faculty of thirty-one, giving it the equivalent of twenty-six full-time teachers and five full-time administrative officers; an income of \$20,250 from tuitions, \$1,500 from other fees, \$10,500 from room rents or other sources, and \$58,250 from endowment; an expenditure of \$45,500 for instruction, \$15,000 for administration and \$30,000 for maintenance; a productive endowment of \$1,165,000 and a plant worth \$750,000, making a total property of \$1,915,000.

The standard college of 500 students calls for a faculty of fifty-one, yielding the equivalent of forty-four full-time teachers and seven full-time administrative officers; an income of \$45,000 from tuitions, \$2,500 from other fees, \$17,500 from room rents or other resources and \$111,000 from endowment; an expenditure of \$99,000 for instruction, \$27,000 for administration and \$50,000 for maintenance; a productive endowment of \$2,220,000, and a plant worth \$1,000,000, making a total property of \$3,220,000.

Standard colleges of 750 students will have, on these estimates, a faculty of seventy-four, yielding the equivalent of sixty-four full-time teachers and ten full-time administrative officers; an income of \$67,500 from tuitions, \$3,250 from other fees, \$26,250 from room rents or other resources, and \$197,000 from endowment; an expenditure of \$174,000 for instruction, \$40,000 for administration, and \$80,000 for maintenance; a productive endowment of \$3,940,000, and a plant worth \$1,750,000, making a total property of \$5,690,000.

The standard college of 1,000 students requires a faculty of ninety-seven, yielding the equivalent of eighty-five full-time teachers and twelve full-time administrative officers; an income of \$90,000 from tuitions, \$5,000 from other fees, \$35,000 from room rents or other resources, and \$312,500 from endowment; an expenditure of \$262,500 for instruction, \$60,000 for administration, and \$120,000 for maintenance; a productive endowment of \$6,250,000 and a plant worth \$2,400,000, making a total property of \$8,650,000.

COMPARISONS

The standards proposed above may very likely seem unreasonably high in some respects. That they are not impossible, however, is shown by the fact that at the lower part of the scale, at least, the estimates are actually surpassed at every point in existing institutions. Two strong eastern colleges, for example, numbers 6 and 3 in the

tables published last year and shown graphically this morning, had respectively 139 and 179 students. One had a faculty of twenty-four, the other of twenty-five; our proposed standard for the college of 200 calls for twenty-one. The income of one was approximately \$76,000, of the other \$170,000; the standard for the college of 200 calls for approximately \$58,000. The expenditure of one was approximately \$67,000, of the other \$78,000, an excess of \$10,000 and \$20,000 respectively over our standard for a larger college. The endowment of one exceeded by more than a half million, that of the other by more than a million, the figures here proposed for an even larger institution. The plant of one was nearly twice, of the other over three times, as large as the standard proposed. If these colleges be regarded as quite exceptional, the interesting case of a college (No. 19) in the far northwest may be cited. This college of 244 students, twenty-two per cent larger than our proposed standard of 200, has a faculty of twenty-four, fourteen per cent more than were assigned to that standard; its income and expense were approximately \$70,000, twenty per cent more than that of the standard. Its endowment, however, was but little over a half million, about thirty-five per cent short of the estimate for the smaller unit, and its plant, worth nearly \$420,000, was sixteen per cent short of that standard. This situation is clearly one that may expect soon not only to measure up to the appropriate proposed standard, but actually to surpass it in every respect. It is true that the larger institutions whose figures are available fall further short of these standards; it is not clear, however, so far as I can see, that the standards are, therefore, too high. I believe that further search would show other confirmations of the reasonableness of these standards as interesting as those that have been quoted.

THOMAS F. HOLGATE,
Acting President of Northwestern University.

The report of the Committee on the "Efficient College" which has been presented and to which, along with others, my name is attached, has been so much more largely the work of Dr. French and the other members of the Committee than of myself. I am, consequently, free to speak of it as a careful and constructive piece of work.

We are sometimes told in these days of rapid developments that the American college is not possible of definition, that what was a college yesterday will not be a college tomorrow, and that a college training for one person is not the same thing as for another, even in the same period of study and in the same institution. However this may be, there is in the minds of most educators a pretty clear notion of what is meant by a college and there is in the minds of the people a growing appreciation of what an American college will yield for the young man or woman who devotes four years to it. However rapidly conditions may change and however frequently we may need to readjust ourselves, there is much to be gained by a careful study of the

essentials of a minimum college and by reducing these essentials to formal statement. It is only by such presentations as the report before us that we can measure the growth of our conceptions and the fluctuations in our definitions.

I wish to discuss only two paragraphs in the report. The first relates to the connection between entrance requirements and the courses of study offered in the college. In the earlier days when freshmen were admitted with identical preparation, all coming with the same amount of Mathematics and Latin and Science, it was an easy matter to prescribe what subjects should be taught in the freshman year and how the various courses should be adjusted. Today, however, students are admitted on certificate of graduation from a four year high school and it may happen that no two of them will present the same credits or will show the same preparation in any subject. They may be assumed to be of approximately the same degree of mental maturity measured by years, but beyond that little can be said. One pupil may have had two years of training in Latin, three years in Mathematics, and two in German; another may have had four years of Latin, two years of Mathematics, with no German. The problem of the college is to provide courses which will be most advantageous to those admitted. The marked variety of preparation subjects the college to a much heavier responsibility than in former years and requires larger equipment in men and material to handle equal numbers of students. The college which has the courage to prescribe its entrance requirements not only in quantity, but in subject, greatly reduces the difficulties of the freshman year. A definite requirement for admission gives a definite starting point for college work, and while it may not be possible or desirable to prescribe requirements in all subjects, any steps in that direction will work toward simplicity in college administration. Without definite requirements for admission the college courses must be greatly multiplied in order to meet the varying attainments of accepted students.

The other paragraph to which I wish to call attention is that on the measure of efficiency. We are all agreed that there can be no mechanical standard of efficiency in college teaching. The character and influence of a teacher, his inspirational power and his ability to mold the ideals of his pupils are not subject to mechanical measurement. The unit of measurement for efficiency suggested in the report refers only to the use of time and material. Even for this purpose the student-hour is not quite a satisfactory unit. It would appear that if this is the accepted unit the efficiency of the teacher, and hence the efficiency of the college, would be increased by doubling, for instance, the number of students in his classes, for in that case he would complete twice as many student hours of instruction in a given time as in the other. That is to say, the college is twice as efficient if it is so organized that each teacher is burdened with fifty pupils in his classes as though he were meeting but twenty-five pupils the same number of hours a week. If crowding increases efficiency, then the student hour is a proper unit for measuring it.

Attention may be called also to another point. The average

college described in the report is obtained by taking the average cost of administration, instruction, and maintenance in several standard colleges, widely separated in point of location and in neighborhoods differing greatly as to cost of living. It must be understood, therefore, that the average college is situated in an average community, and that all sorts of modifications will need to be made in adjusting such a college to particular conditions. An efficient college in Missouri, where living is cheap, would not be at all efficient with the same income and the same expenses on the "Gold Coast" of Lake Michigan, for example. The study, however, is helpful in setting forth an ideal which may be attained and which may be used as a basis from which necessary variations are to be made.

DONALD J. COWLING,
President of Carleton College.

I have one or two suggestions of a practical sort that I should like to place before the members of the Association. In the first place, Mr. President, I wish that this body might see its way clear to recommend to the members of the Association that they get out each year a financial statement along somewhat uniform lines. I do not believe that it would be very difficult to do this. I should like to suggest first that there is a very great difference between a financial statement such as is usable in connection with the study of educational institutions and a treasurer's report. A great many institutions get out an elaborate treasurer's report which is satisfactory enough from the standpoint of technical bookkeeping, but is couched in terms purely local, with the result that the college authorities themselves are not able to answer readily inquiries made by outside parties, and it is nearly hopeless for any outside party to pick out from these intricate reports the information desired. Let me emphasize the difference between a simple, straightforward statement of the expenses involved in carrying on the educational work of an institution and such elaborate and complex documents as are frequently issued containing intricate records of all sorts of financial operations conducted during the year.

Now, it seems to me, that there are certain things that ought to be excluded from the annual statement of the current expenses involved in carrying on the educational work of a college or university. In the first place, there should be vigorously excluded all expenses involved in connection with college dormitories, dining halls, college farms, college laundries or other accessories. If there is a net deficit in any of these undertakings and it seems worth while to maintain them, such a net deficit may very properly be listed as part of the annual college expense.

QUESTION: What about the net gain?

PRES. COWLING: Net gain would not appear in the statement of expense, but would appear as a source of income. I feel the same way about lectures and concerts and things of that sort. If there

is a net deficit it may very properly appear in the list of expenses. If there is a net gain, it would be a source of income. Expenses for athletics, other than coach's salaries, should be treated in the same way. Only net deficits should appear in the annual expense account of the college. Colleges are coming more and more to regard athletic directors as regular members of the faculty and their salaries are properly included in the regular salary budget.

All scholarships and rebates of tuition should also be excluded from the statement of annual expenses although it is a common custom to include them. The income from scholarship endowment funds should, of course, be listed as income. There is nothing added to the educational forces of a college as the result of the granting of scholarships, and, therefore, they should not be included in the statement of educational expenses. Similarly, all interest payments and all payments for annuities should be excluded, although it is very common to include interest along with insurance, for example. Insurance obviously is a very proper charge but interest is not. Expenses involved in caring for property owned as endowment should also be excluded. I know one institution that follows the policy of investing a large part of its endowment funds in city real estate. The expense involved in looking after the renting and maintenance of commercial buildings is, of course, no proper charge under the head of administration expenses of a college.

Now, the last point is this, that every item that constitutes an addition to capital ought to be excluded. This is the most radical suggestion of all. This would exclude, for example, expenses for the purchase of books or additions to scientific apparatus—items that are almost universally included in statements of current expense. If an institution spends five thousand dollars a year for new books, that money, of course, is not spent entirely in educating the students in attendance that year. A substantial sum is added to the amount invested in permanent equipment. The line of division is not difficult to draw. Whenever, in your annual statement of assets, you add to the amount invested in your equipment as the result of any given expenditure made during the year, do not include the item in current expense. In case of repairs, for example, you don't add to your capital and such an expenditure should be listed in current expense. So it is not difficult to decide.

Now, on the other hand, if an institution charges off a certain amount for depreciation in its educational equipment or educational buildings, and actually deducts this from the book value of its assets, the amount thus charged off should be included in the annual statement of current expenses.

DEAN COLE: Isn't President Cowling inconsistent in wanting to keep an item out of the current income if it adds to your capital, and, on the other side, if your capital is diminished by charging-off process, to put that in your current expenses?

PRES. COWLING: That is consistent, isn't it?

DEAN COLE: Is it?

PRES. COWLING: Why, yes, that is just where the consistency comes in.

DEAN COLE: The depreciation?

PRES. COWLING: Yes; of course, the ideal way is to spend enough each year on repairs and replacements, items that would appear in current expense, to keep your educational buildings and equipment up to their book value.

If we could all agree on issuing an annual financial statement along the lines suggested above, we should then have a common basis for comparison and also the data necessary for the calculation of the cost per student. The limits that were given this morning, \$512 as the cost per student in one institution and \$174 in another, may not represent actual differences. I feel sure, although I haven't gone over the matter with Dr. French, that these figures are based on financial statements that do not include the same items and are, therefore, not directly comparable.

Now, with a current expense statement made out along the lines suggested, if you will add to the amount of current expense, five per cent on the investment represented in your educational buildings and equipment, you will have a sum representing the total cost of educating the students in attendance that year. If you divide this sum by the number of students, you will get the cost per student per year and in terms that will be comparable as between different institutions.

There are one or two other matters that appear in Dr. French's report that I should like to say a word or two about. One is the question of the size of a college. Some four or five years ago, five of us, the Presidents of Knox, Beloit, Grinnell, Colorado, and Carleton, thought that we might help each other by a comparative study of our different institutions. President Main of Grinnell and I spent a couple of days going over the material submitted, and as a result of our study, we prepared an outline of a model faculty for a college of five hundred students. Our findings correspond almost identically with Dean Cole's report; and his agreement with Dr. French, both working independently of each other, begins to convince one that there must be something of a science underlying this whole thing, and that these studies really amount to something. It is a bit tedious to sit through a session of this sort, but when we go away we do have in mind somewhat definitely the things we are aiming after.

One of the questions this morning was, how many colleges are there in America that represent the standards we are setting up? That is the very point of our efforts. Aside from a few colleges in the East, I don't believe there is a college in America that represents a model situation. It is exceedingly difficult to be sincere about these matters. Most of us have two jobs on hand—telling prospective students about what we have and how strong we are, and then turning around and telling prospective givers that we are in a bad way after all and that they ought to help us out. I say it is exceedingly difficult to be sincere, but I believe that Dr. French has sketched for us something that represents about what we ought to have if we are going to do our work with a fair degree of efficiency.

It does seem to me that a college very much less than five hun-

dred, a co-educational college in particular, is too small. I do not mean to imply that a lot of institutions very much smaller than this are not doing excellent work, but it is pretty nearly true that, with the exception of an institution here and there like Haverford, and I haven't heard anyone mention a second situation like Haverford, we are all trying to reach at least the five hundred mark. If Haverford can afford to maintain its present situation for a small number of students, all well and good; it is fortunate for those students; but it seems to me that ordinarily a college very much less than five hundred, a co-educational college, two hundred and fifty boys and two hundred and fifty girls, is too small. I think one finds his judgment reinforced at this point when he talks with his friends. Most presidents of colleges of less than five hundred students are struggling tremendously to reach that mark, and when they reach it they begin to lose their interest in mere numbers. It is when they get along to about five hundred that you find the presidents of most colleges beginning to feel pretty comfortable and to become conscious of the fact that there are other ends to be realized than mere expansion. So it seems to me that a goal of about five hundred is what we are actually aiming at after all.

As to whether a college should admit more than five hundred students, that is a question which every institution must answer for itself. I do not believe an institution needs to grow much larger than five hundred for its own sake. From this point on, it is simply a question of the needs of one's constituency, and the things to be guarded against here is lest the institution expand faster than it can secure new funds to maintain its standards. It is commonly agreed that certain general relationships hold within a college, such as one teacher for every ten students, recitation exercises to be limited to thirty, laboratory sections to fifteen, that no teacher be expected to teach more than from ten to fifteen hours per week, etc. If a college of limited resources with five hundred students is able to provide these conditions, it would be a serious blunder to admit additional students in such numbers as would lower these standards and weaken its educational effectiveness. But if a college can secure new funds to preserve all this and is called upon by its constituency to expand its work, I can see no reasonable objection to eight hundred or a thousand students, or even more.

The following are some of the considerations that justify our striving after a goal of at least five hundred students. In the first place, it would seem that a college ought to be large enough to have at least two or three teachers in every important department. Any one man in a department, if left to himself, is apt to miss the professional stimulus needed to keep him at his best, and he certainly misses the professional companionship and competition that helps so greatly in keeping the ideals of his department fresh and vigorous in his interest. It is not altogether unheard of for a professor, living his professional life in isolation, actually to become a fossil without anybody knowing that the life has gone out of him until a long time after the transmutation has taken place. A teacher needs

the competition, the stimulus and the inspiration that professional companionship supplies.

Furthermore, a college needs to be large enough to offer a student a variety of courses, sufficiently representative of the important interests of life to enable him to discover his own tastes and adequately to test his own capabilities. It is now pretty generally agreed that unrestricted freedom in elective studies is of questionable value to the average student, but it is equally clear that any limitation that may be imposed should not spring from motives of financial economy and should certainly not be made necessary by the financial limitations of the institution. To make a virtue of any such necessity is to enthrone insincerity and to becloud our thinking with considerations of practical compulsion.

Last night President King spoke of the complexity of life as a thing to be taken account of in education. The meaning of every life is to be found in the relationships it sustains, and the importance of a life is to be measured in terms of the number and significance of these relationships. Now, the process of establishing these relationships is well under way when a boy comes to college, and the college situation must be complex enough to be fairly representative of the world for whose life the boy is to be trained. There can be no question but that it is the pressure of an institution as a whole that really molds its students, and the type of man it turns out is the resultant of many and complex forces. I would not for a moment subordinate the curriculum to so-called college activities, but I do insist that these activities have a very proper place among the forces that produce men; and that the task of college administrators is properly to direct and utilize these "outside activities" and not, by abolishing them, to discard what is of tremendous potential value. If all this were otherwise, then a monastery or a private tutor would provide the ideal conditions for education; but experience has rendered a different verdict.

But if anything like a fair proportion of student activities is to be maintained, then a student body of some size is altogether essential. A student body of one hundred and fifty boys is not large enough, without undue pressure upon individuals, to support football, basketball, baseball, and track work, literary societies, inter-collegiate oratory and debate, glee club, orchestra and chorus work, the college choir and the Y. M. C. A. These activities are all helpful and right in proper proportions, but when they are loaded on a student as a burden for him to carry, not primarily for his own good, but to add glory to the name of his college, then we pass over from where the college is a help to the student to the point where the student's welfare is sacrificed for the college. Colleges were made for students and not students for the college. The only satisfactory adjustment is to have a student body large enough to support such a variety of activities as will meet the needs and tastes of all types of students without becoming a burden upon any of them.

Another consideration that should have weight in forming an opinion as to how large a college should be, is the matter of buildings and apparatus and other material supplies. If a railway train is

equipped with a couple of day coaches and a parlor car and a diner, it can carry one hundred passengers as well as ten; but, without such equipment, it cannot lay claim at all to providing first-class conveniences for travel. Similarly, a college needs a certain quantity of material equipment if it is to do first-class work.

It must possess, first of all, a decent library. Probably not less than fifty thousand volumes could be regarded as fairly representative of the various fields with which a college of liberal arts concerns itself. A college must also have laboratories and these cost money—a great deal of money. The various fields of scientific interest cannot be disclosed to the student except in connection with experiments and demonstrations which require a good deal of expensive apparatus.

The physical development and welfare of young people also place upon a college the responsibility for providing gymnasiums that shall be adequate for all kinds of systematic and intelligent exercise, in order that the causes of physical defects may be disclosed and the student enabled to develop and command his own physical resources.

No institution that is conspicuously lacking in any of these facilities can rightfully claim to be offering its students the opportunities for a first-class college education. On the other hand, if an institution has these things in fair proportions, it will probably be able, so far as material equipment is concerned, to admit five hundred students as well as two or three hundred. In fact, it is a question whether, from the point of view of society at large, a college is justified in having such expensive equipment for a much smaller service than would be represented by a student body of five hundred.

The prestige of a college is another point that we ought not to overlook entirely. I know men who have a feeling of ill will against their college, not only because it did not do for them as undergraduates what ought to have been done, but because the standing of their college has been such as to require explanation and apology all the rest of their lives. In these times when pioneer conditions are a thing of the past, when facilities for travel are ample and cheap, when there is scarcely a state in the Union that does not have at least one good college and when many of them have more colleges than they need, it would seem altogether unjustifiable to place upon a student the handicap of receiving his college education, or the semblance of such education, in an institution utterly incapable of doing sincere college work.

There is just one other subject, Mr. President, which I should like to speak of briefly, and that is, the distribution of students as between the different college classes. If the denominational and independent colleges of America are to remain as a permanent part of our educational system, we have got to do something that the state supported universities and colleges cannot do. President King placed before us last night a very satisfactory statement of just what our distinctive task is. Now, when does an institution have its opportunity to do the thing that President King set forth so significantly

in his address last night? It is not in the teaching of elementary science or mathematics in the Freshman year, nor beginning languages in the Freshman or Sophomore years. These two years simply prepare the way for doing in the two upper years exactly the thing that President King pleaded for in his admirable address. The two upper years present the opportunity for doing the distinctive and characteristic work that differentiates us from the state supported institutions. So far as I am concerned, if I were persuaded that the colleges were to lose their opportunity to work with students through the Junior and Senior years, I should be ready to give up the struggle of trying to find support for higher education from private sources and would favor turning the whole thing over to the state.

I do not believe that the work of the Freshman and Sophomore years is sufficiently distinctive, or that it gives the teachers of a college the opportunity to do a sufficiently significant work, to warrant our going out and trying to persuade the public to support us in addition to the lavishly supported state institutions.

The work of the two upper years is fundamental and constitutes the only adequate reason for our existence.

The history of this study, "The Efficient College," is as follows:

In January, 1915, Dr. Calvin H. French of the College Board of the Presbyterian Church, as chairman of a Committee on the Minimum and the Efficient College of the Council of Church Boards of Education and for them, presented to the Association of American Colleges, in multigraph form, the report of the Committee. This was the initial meeting of the Association. Feeling that the Association members should have opportunity to consider the report thoroughly and in detail, the Association ordered that a sufficient number of copies for each member be prepared and distributed, and that Dr. French be requested to secure suggestions and further data from the Colleges and present a revised report at the next meeting of the Association, January, 1916. This was done, Dean Cole of Oberlin College being asked to open the discussion. The Association printed the report both as a part of the "Annual Proceedings," No. 3 of Vol. II of Bulletin, and separately as No. 1 of Vol. II of Bulletin, and appointed a committee, with Dean Cole as chairman, to co-operate with Dr. French in further study and revision and further report. The result is given in this volume, which contains, in fact, the proceedings of the Friday morning session of the Third Annual Meeting of the Association of American Colleges January 12, 1917. This report and discussion are not printed in the regular issue of the Annual Proceedings of the April Bulletin, No. 3 of Vol. III, and are printed only here.

RICHARD WATSON COOPER, Secretary.

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